



Digitized by the Internet Archive
in 2008 with funding from
Microsoft Corporation

AMERICAN ANTHROPOLOGIST

NEW SERIES

ORGAN OF THE AMERICAN ANTHROPOLOGICAL ASSOCIATION,
THE ANTHROPOLOGICAL SOCIETY OF WASHINGTON,
AND THE AMERICAN ETHNOLOGICAL
SOCIETY OF NEW YORK

PUBLICATION COMMITTEE

J. WALTER FEWKES, *Chairman ex-officio*; J. R. SWANTON, *Secretary ex-officio*;
JUAN B. AMBROSETTI, FRANK BAKER, FRANZ BOAS, ALEXANDER F.
CHAMBERLAIN, STEWART CULIN, GEORGE A. DORSEY, ALICE C.
FLETCHER, GEORGE BYRON GORDON, F. W. HODGE, W. H. HOLMES,
B. TALBOT B. HYDE, H. VON IHERING, A. L. KROEBER, RODOLFO
LENZ, NICOLAS LEÓN, GEORGE GRANT MACCURDY, W. J. MCGEE,
CHARLES PEABODY, F. W. PUTNAM, EDWARD SAPIR, FREDERICK
STARR, CLARK WISSLER.

J. R. SWANTON, *Editor*, WASHINGTON, D. C.
PAUL RADIN, *Associate Editor*, WASHINGTON, D. C.

VOLUME 13

LANCASTER, PA., U. S. A.

PUBLISHED FOR

THE AMERICAN ANTHROPOLOGICAL ASSOCIATION³

1911

124533
16/10/12

GN

I

AS

N.S

V. 13

COP. 2

PRESS OF
THE NEW ERA PRINTING COMPANY
LANCASTER, PA

CONTENTS OF VOLUME 13

ARTICLES

	PAGE
Huron Moose Hair Embroidery. F. G. SPECK. (Plates I-III) . . .	1
Some Aspects of Nootka Language and Culture. EDWARD SAPIR. . .	15
An Ancient Sepulcher at Placeres del Oro, State of Guerrero, Mexico. H. J. SPINDEN. (Plates IV-VI)	29
Bulu Knowledge of the Gorilla and Chimpanzee. ALBERT ERNEST JENKS.	56
A Petroglyph from Eastern Massachusetts. HARRIS HAWTHORNE WILDER. (Plate VII)	65
Menominee Tales. TRUMAN MICHELSON	68
The Present State of our Knowledge Concerning the Three Linguistic Stocks of the Region of Tierra del Fuego. ALEXANDER F. CHAMBERLAIN.	89
Anthropology at the Providence Meeting, with Proceedings of the American Anthropological Association for 1910. GEORGE GRANT MACCURDY.	99
A New Conception of Totemism. ROBERT H. LOWIE.	189
Notes on the Material Culture of the Huron. F. G. SPECK. (Plates VIII-XI)	208
The Four Seasons of the Mexican Ritual of Infancy. STANSBURY HAGAR.	229
New England Names. DAVID I. BUSHNELL.	235
Aboriginal Remains in the Champlain Valley (Second Paper). G. H. PERKINS. (Plates XII-XVII)	239
The Problem of Noun Incorporation in American Languages. EDWARD SAPIR.	250
Additional Notes on Iroquois Silversmithing. ARTHUR C. PARKER	283
Native Account of the Meeting between La Perouse and the Tlingit. G. T. EMMONS.	294
War Customs of the Menomini Indians. ALANSON SKINNER. . . .	299
Proceedings of the Anthropological Society of Washington.	313
Notes on the Kado or Sun Dance of the Kiowa. HUGH LENOX SCOTT. (Plates XVIII-XXV)	345
Phonetics of the Micronesian Language of the Marshall Islands. A. L. KROEBER. (Plates XXV-XXVIII)	380

Professor Boas' New Theory of the Form of the Head—A Critical Contribution to School Anthropology. PAUL R. RADOSAVLJEVICH.....	394
Description of a Winnebago Funeral. OLIVER LAMERE and PAUL RADIN.....	437
Archeological Evidence as Determined by Method and Selection. HARLAN I. SMITH.....	445
Philippine Literature. FRANK R. BLAKE.....	449
On the Puelchean and Tsonekan (Tehuelchean), the Atacameñan (Atacaman) and Chonoan, and the Charruan Linguistic Stocks of South America. ALEXANDER F. CHAMBERLAIN.....	458
The Genesis of the Maya Arch. EDWARD H. THOMPSON. (Plate XXX).....	501
Some Aspects of Winnebago Archeology. PAUL RADIN.....	517
The Ruins of Tuloom. GEORGE P. HOWE.....	539
A Comparative Sketch of the Menomini. ALANSON SKINNER.....	551
Certain Earthworks of Eastern Massachusetts. CHARLES C. WILLOUGHBY.....	566
Incorporation as a Linguistic Process. A. L. KROEBER.....	577
A New Feature in the Archeology of the Missouri Valley in North Dakota. GEORGE F. WILL.....	585
Exogamy and Totemism Defined: a Rejoinder. A. A. GOLDENWEISER.....	589

BOOK REVIEWS

LÉVY-BRUHL: Les Fonctions Mentales dans les Sociétés Inférieures (<i>Goldenweiser</i>).....	121
ROUTLEDGE: With a Prehistoric People: the Akikúyu of British East Africa (<i>Lowie</i>).....	130
PARKER: Iroquois Uses of Maize and Other Food Plants (<i>Speck</i>)..	135
SELIGMANN (with a chapter by F. R. Barton): The Melanesians of British New Guinea (<i>Jenks</i>).....	136
BINGHAM: A Gilbertese-English Dictionary (<i>Dixon</i>).....	138
BROWN: Melanesians and Polynesians (<i>Dixon</i>).....	139
DIXON: The Chimariko Indians and Language (<i>Sapir</i>).....	141
LE ROY: La Religion des Primitifs (<i>Starr</i>).....	144
THONNER: Im Afrikanischen Urwald and Von Kongo zum Ubangi (<i>Starr</i>).....	146
VAN OVERBERGH: Les Warega (<i>Starr</i>).....	148

LEÓN: La Obstetricia en México. Notas Bibliográficas, Etnicas, Históricas, Documentarias y Críticas, de los orígenes históricos hasta el año 1910 (<i>Chamberlain</i>).....	149
BEAN: The Racial Anatomy of the Philippine Islanders, introducing New Methods of Anthropology and showing their Application to the Filipinos, with a Classification of Human Ears and a Scheme for the Heredity of Anatomical Characters in Man (<i>Chamberlain</i>).....	150
STARR: Philippine Studies. I. A Little Book of Filipino Riddles (<i>Chamberlain</i>).....	152
MOOREHEAD: The Stone Age in North America (<i>Bushnell</i>).....	153
FISHBERG: The Jews: a Study of Race and Environment (<i>Hrdlička</i>).....	320
JOHNSON: The Prehistoric Period in South Africa (<i>MacCurdy</i>)....	322
UHLENBECK: Geslachts—en Persoonsnamen der Peigans (<i>Lowie</i>)..	324
UHLENBECK: Original Blackfoot Texts (<i>Michelson</i>).....	326
ROTH: Some Technological Notes from the Pomeroon District, British Guiana (<i>Hough</i>).....	330
SARG: Die Australischen Bumerangs im Städtischen Völkermuseum (<i>Hough</i>).....	330
DILLENIUS: El Hueso Parietal bajo la influencia de la deformación fronto-occipital; contribución al estudio somático de los antiguos Calchaquies (<i>ten Kate</i>).....	331
HADDON: Cat's Cradles from Many Lands (<i>Boas</i>).....	334
CONANT: The RGH Law in Philippine Languages (<i>Blake</i>).....	472
MARKHAM: The Incas of Peru (<i>Farabee</i>).....	473
TORDAY and JOYCE: Notes Ethnographiques sur les peuples communément appelés Bakuba ainsí que sur les peuplades apparentees.—Les Bushongo (<i>Boas</i>).....	478
TREMEARNE: The Niger and the West Sudan: the West African's Note-Book (<i>Starr</i>).....	480
DENNETT: Nigerian Studies; or the Religious and Political System of the Yoruba (<i>Starr</i>).....	481
Collection de Monographies Ethnographiques. VI. Les Kuku (VANDEN PLASS). VII. Les Ababua (HALKIN and VIAENE). VIII. Les Mandja (GAUD and OVERBERGH) (<i>Starr</i>).....	483
HARTLAND: Primitive Paternity, the Myth of Supernatural Birth in relation to the History of the Family (<i>Goldenweiser</i>).....	598
SMITH: The Prehistoric Ethnology of a Kentucky Site (<i>Mills</i>)....	606
RUTOT: Le Préhistorique dans l'Europe Centrale (<i>MacCurdy</i>)....	607
CURTIS: The North American Indian (volumes VI, VII, and VIII) (<i>Farabee</i>).....	609

BUDGE: Osiris and the Egyptian Resurrection (<i>Casanowicz</i>)	615
The Encyclopedia Britannica (<i>Wallis</i>)	617
JEVONS: The Idea of God in Early Religions (<i>Wallis</i>)	620
WATERHOUSE: Modern Theories of Religion (<i>Wallis</i>)	621
AVEBURY: The Origin of Civilization and the Primitive Condition of Man (<i>Lowie</i>)	623
Some New Publications	155, 335, 486, 623
Bibliography of Periodical Literature: Compiled by <i>Alexander F.</i> <i>Chamberlain</i>	625

ANTHROPOLOGIC MISCELLANEA

David Boyle, 159. A Key to the Navaho Orthography Employed by the Franciscan Fathers, 164. The Numerals "Two" and "Three" in Certain Languages of the Southwest, 167. Activities of the Anthropological Department of the Field Museum of Natural History, 168. Fate of the New York State Collections in Archeology and Ethnology in the Capitol Fire, 169. On the Future of the Independent Mode in Fox, 171. A Rare Missouri Flint, 172. Edward Palmer, 173. The Origin of the Names Ute and Paiute, 173. Minor Notes, 174-180. Annual Meeting of the American Anthropological Association, 337. Kalamazoo, 337. Note on the Gentes of the Ottawa, 338. On the Etymology of the Natick Word *Kompau*, 'He stands erect,' 339. The School of American Archaeology, 339. Minor notes, 340-344. The Stone Collars and Three-pointed Stones of the West Indies (Plate XXIX), 489. Mr Bushnell's Review of "The Stone Age," 494. Anthropological Work under the Canadian Government, 496. The Museum of Anthropology of the University of California, 498. Minor notes, 499-500. Mr Warren K. Moorehead and "The Stone Age in North America," 722. Some Shoshonean Etymologies, 724. A Tentative List of the Hispanized Chumashan Place-Names of San Luis Obispo, Santa Barbara, and Ventura Counties, California, 725. Minor notes, 726-731.

Officers and Members of the American Anthropological Association, 181	
Index to Authors and Titles.....	732

American Anthropologist

NEW SERIES

VOL. 13

JANUARY-MARCH, 1911

No. 1

HURON MOOSE HAIR EMBROIDERY

By F. G. SPECK

THE use of moose, caribou, or reindeer hair in appliqué embroidery upon skin seems to have an extremely wide distribution in the north of both Asia and North America. As pointed out by Dr Boas, forms of this hair technique are found ranging from Siberia to the lower St Lawrence in Canada with remarkable continuity, among the Koryak,¹ the Chukchee,² the Eskimo of Alaska,³ the Indians of the Mackenzie area,⁴ those of the Great Lakes, both Iroquois⁵ and Algonkians, and those of the St Lawrence valley⁶ and New England.⁷ No general or comparative studies in this form of art seem as yet to have been made; nothing

¹Jochelson, *Memoirs of the American Museum of Natural History* (Jesup North Pacific Expedition), vol. vi, p. 681.

²Bogoras, *ibid.*, vol. vii, part 1, pp. 226-7.

³Nelson, *18th Annual Report Bureau of American Ethnology*, part 1, pp. 37, 38, 39, 41. Also observed on Eskimo specimens from King Id. and Diomed Id. in the Museum of the Univ. of Pa., collected by Dr G. B. Gordon.

⁴*Voyages to the Arctic* (1789-1793) Mackenzie (Trailmakers Series), Vol. 1, pp. cxlii, 235 (Cree and Chippewyan).

⁵Information furnished by Mr A. C. Parker, State Museum, Albany, N. Y. The technique is also found on specimens from the Great Lakes in the collection of Mr G. G. Heye, Univ. of Pa. Museum.

⁶Observed by the writer among the Montagnais about Lake St John, P. Q.; also recorded by Mr A. B. Skinner among the eastern Cree.

⁷Willoughby, *Dress of the New England Indians*, *American Anthropologist*, N. S., vol. 7, p. 502, quoting S. G. Drake's *Tragedies of the Wilderness*, p. 52. Observed by the writer among the Penobscot, Passamaquoddy, and Malisit.

more than records of its occurrence in particular tribes having appeared, so far as I am aware.¹

During several visits in 1908 and 1909 to Indian Lorette, P. Q., Canada, where the Huron Indians engage extensively in the manufacture of hair-embroidered articles, I had the opportunity of making the studies which are now presented. The decorative technique which, it should be borne in mind, is strictly an embroidered and not a woven one, together with the patterns discussed here, while they may not be limited to the Huron, are nevertheless to be taken properly as a special study of Huron art. My studies were made from the purely objective standpoint, the only one which seems safe to follow at present until the art of the adjacent Algonkians and Iroquois has been investigated. From the earliest times, according to the testimony of the Indians themselves, the Huron produced decorative effects on their clothing, and various buckskin articles, by embroidering the surfaces in appliqué with different colored moose hairs. With the Huron hair embroidery has developed to such an extent as to take the place of quill work and beadwork almost entirely, affording the characteristic means of artistic decoration, as porcupine quill work, painting, beadwork, and various kinds of blanket and basket weaving do elsewhere in America. While no historical records contain, as far as I know, any specific reference to the technique in this tribe, a number of old specimens in museums² and in the possession of the Huron themselves indicate the antiquity and the native origin of both the technique and some of the designs.

Before discussing the designs and their significance some objective aspects of the art will be treated. The field of decoration has no very definite limits, the designs being placed upon buckskin surfaces wherever feasible. The characteristic places for ornamen-

¹ H. Ling Roth, *Journal of the Royal Anth. Inst. of Gt Britain* etc., vol. 38, p. 51 (1908), illustrates and describes, in an article entitled "Moccasins and Their Quill Work," a moccasin, pl. viii, fig. 9, and a knife sheath, fig. 10, in which he has quite evidently mistaken the moose hair for the porcupine quill technique.

² Specimens may be found in the collections of the Peabody Museum, Cambridge, Mass.; American Museum of Natural History, N. Y.; New York State Museum, Albany, N. Y.; and in the Heye collection, Museum Univ. of Penna., Phila., Pa.

tation, however, were and are, as follows: the bands on men's head-dresses (when not covered with silver work); the epaulets, sometimes the cuffs, and collars of buckskin coats; the lower borders of shirts and the front facings; the flaps of both men's and women's leggings; below the knee in a band-like strip and about the lower border of the legging; women's cuffs and collars; the lower border of the long loose woman's waist and skirt; and the moccasin vamp and lapel. Belts, bandoliers, pouches, bags, and knife-sheaths were also similarly decorated. The manufacture of many modern articles of embroidered buckskin fashioned after the old style, especially moccasins, for commercial purposes, is a regular industry among the Huron today.

The materials employed are moose hairs, needle and thread, the latter, according to the opinions of the Indians, replacing awl and

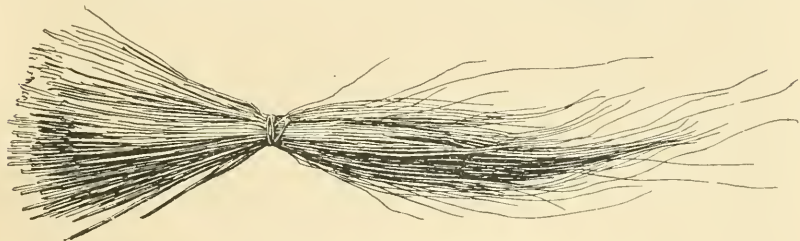


FIG. 1.—Bundle of moose hair.

sinew. Quantities of moose hair are obtained by Indians who hunt every fall in the Laurentian mountains. Caribou hair as a substitute for moose hair is declared by the Huron to be useless on account of its shortness and fineness. The moose hairs, or more properly bristles, are about five inches long and come from the mane and cheeks of the animal, those from the rump being also available. They are then kept in bundles of several colors tied together (fig. 1), from which they are drawn when wanted. The Huron have for so long a time indulged in the use of aniline dyes for their moose hair that I did not succeed in learning any of the native dyes. Numerous colors and shades are used, though red, dark green, blue, and natural white, are the commonest.¹

¹ Cf. G. S. Theodat (*Le Grand Voyage*, Paris, 1632, reprinted Paris, 1865, p. 91), a priest among the Hurons in 1624 who wrote that the women made a kind of pouch

The process of embroidering, which is a women's activity, is as follows. The operator starts her design by choosing from her bunch of bristles a small quantity having the desired shade, and transferring them to her mouth. From the mouth they are again transferred, 4 to 6 together, to the buckskin and stitched down with thread at intervals of about one-sixteenth of an inch. Usually 4 bristles at a time are stitched down for the narrow line patterns, and 6 to 10 for the broader and more solid flower figures. When near the end of this strand of hairs the operator inserts another, trims off the ends of the old which have been left loose under the last stitch, and continues. The joinings are accordingly invisible while the design is stitched on, forming for some distance a continuous line. To end a line of embroidery it is either covered with a stitch, or doubled back on itself far enough to cover the end. Beginning at the bottom the artist builds up her design, choosing, as she proceeds, the particular figures in her repertoire. The needle is passed completely through the material with each stitch, a piece of paper often being held underneath and allowed to remain when the design is finished.

In the different ways of applying the moose hairs, several techniques, producing varied decorative effects, are to be observed. In the characteristics of these devices there appears to be some significance in their widespread similarity, whether present in Koryak, Eskimo, or Indian embroidery. Some devices, as will be seen, are identical with those employed in the porcupine quill technique so widely practiced in America.¹ Four of these devices for decorating flat surfaces have been observed among the Huron.

1. The simplest technical form is that which may be called the simple *line*, where the hairs are merely stitched down, without twisting or bending, upon the surface, as in fig. 2, *a*. This device is found practically the same all over the range of the hair em-

or tobacco bag of skin on which they did work worthy of admiration with porcupine quills colored red, black, white, and blue. Quoted by H. Ling Roth, *Journal of the Royal Anth. Institute of Gt Britain* etc., vol. 38, pp. 47-57 (1908).

¹A detailed comparative study of the American porcupine quill technique is being made by Mr W. C. Orchard whose manuscript, though still unfinished, contains an account of some forty varieties.

broidery. By crowding these lines close together, or by curling them in a spiral, solid areas may be covered with designs (pl. III) which are often hard to distinguish from these done with porcupine quills. Animal and life forms are often treated in this way.

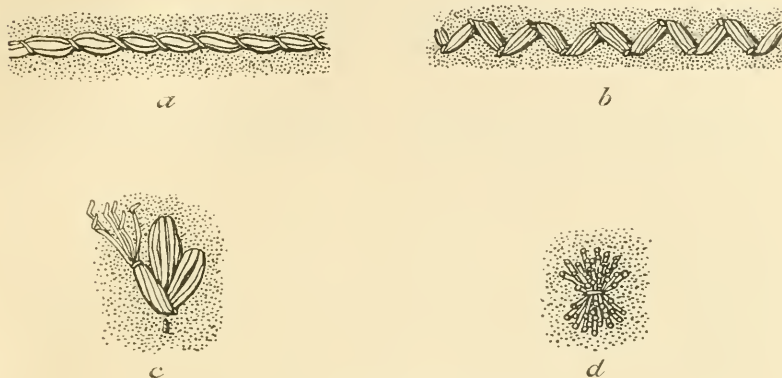


FIG. 2.—Embroidery techniques.

2. The *zigzag* technique, in which the line is started as for the preceding but bent at right angles to itself with each stitch, is most characteristic (fig. 2, *b*). Here the thread of each stitch is concealed by the bent-over hairs. The device is very agreeable and simple, being used throughout the whole hair embroidery region as a border.¹

3. An *overlapping* appliqué connected with the preceding is prominent in the formation of the flower designs. In this more hairs are, as a rule, used together to give more body to the figure. The main idea in this device is that the thread stitches are entirely out of sight, being concealed in the folds of the hairs, while the latter bulge somewhat between the stitches, producing an effect very favorable for the representation of the flower petals or fir leaves in which the device is chiefly employed (fig. 2, *c*).

4. The other Huron technique, which is also to be observed on Eskimo specimens, may be termed the *bristle*, because here the

¹A variation of the border zigzag is common on a number of Eskimo specimens from Alaska, collected by Dr Gordon, in which the same process is modified to produce a meander.

hairs are cut through between the stitches allowing the loose ends to stand erect forming a bed of bristles (fig 2, *d*).

Of edging devices two are common. One (fig. 3, *a*), the plain edging, has a mass of hairs stitched directly along the edge of the buckskin entirely concealing it, the other, the zigzag edging, used also in covering seams, has the hairs sewed on in zigzags over the edge (fig. 3, *b*).



FIG. 3. Edging techniques.

Recently the Huron have taken to ornamenting birch bark boxes with the moose hair designs, the same patterns and method of attachment being employed as on buckskin. The finish and workmanship of these articles is most ingenious.

While dealing with the use of moose hair as a means of decoration, mention should perhaps be made of the bristle and metal dangles commonly employed as a fringe or edging for embroidered surfaces. Dangers or pendants of the same kind are to be found among the plains tribes. With the Huron there are two varieties. One consists of little clusters of moose hair, horse, or caribou bristles,

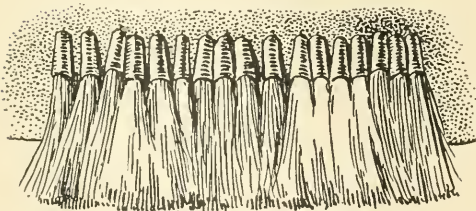


FIG. 4. Metal and bristle fringe.



FIG. 5. Metal and bristle dangles.

white or red, with a cone of tin around the base (fig. 4), the series usually being arranged in a compact fringe. The other (fig. 5) is similar to the first in all respects except that a few beads are

attached to make it longer, and the individual dangles are set farther apart. The dangles occur chiefly on the epaulets of coats, as an elaborate substitute for a simple fringe, along the seams or on the flaps of men's leggings, and sometimes on flat surfaces of fancy articles of buckskin or undressed caribou skin, as in figure 5.

Moose hair in its natural white color is also used by the modern Huron as a false embroidery decoration on finger rings and bracelets made of splint and horse hair. The foundation of the ring consists of a narrow splint around which either black or red dyed horse hair is tightly wrapped. A few white moose hairs are inserted under the horse hair wrapping, going over and under it and exposing one or more stitches to bring out some fancy figure. The technique is identical with that common among the plains tribes,¹ who decorate the quills of feathers in their headdresses with horse hair wrapping and turkey beard insertion. A similar ornamental device is common on the rims of bark baskets among the northwestern Canadian tribes,² and I have seen it on quilled Penobscot pipe stems.

DESIGNS.—We find here that, like many primitive people, the Huron have associated their decorative figures with familiar objects which they seem to resemble, and have accordingly given them a certain class of names. The important feature of these design names is that they are for the most part taken from the plant kingdom. Thus we have among them, representations of balsam fir, barberry, flox, marguerite, clover, and parts of plants such as roots, trunks, stumps, crossed branches, vegetation which conceals the roots, buds, fruit, and the part that covers the base of the branch, all of which are more or less conventionally realistic. Besides these, two others, not plant names, the star and the cat's paw, occur. Figure 6 shows these elementary figures, some with slight variations in their forms.

The larger designs are used independently but more frequently are combined to make up a complete figure resembling a tree or

¹ The technique is found on specimens from the Osage in the Heye collection, Univ. of Pa., and the Winnebago and Sauk and Fox in the American Museum of Natural History, N. Y., collected by Mr A. B. Skinner.

² Cf. Teit, The Shuswap, Jesup North Pacific Expedition, *Memoirs of the American Museum of Natural History*, N. Y., vol. II, no. 7, pp. 480-7, for discussion by Dr Boas.

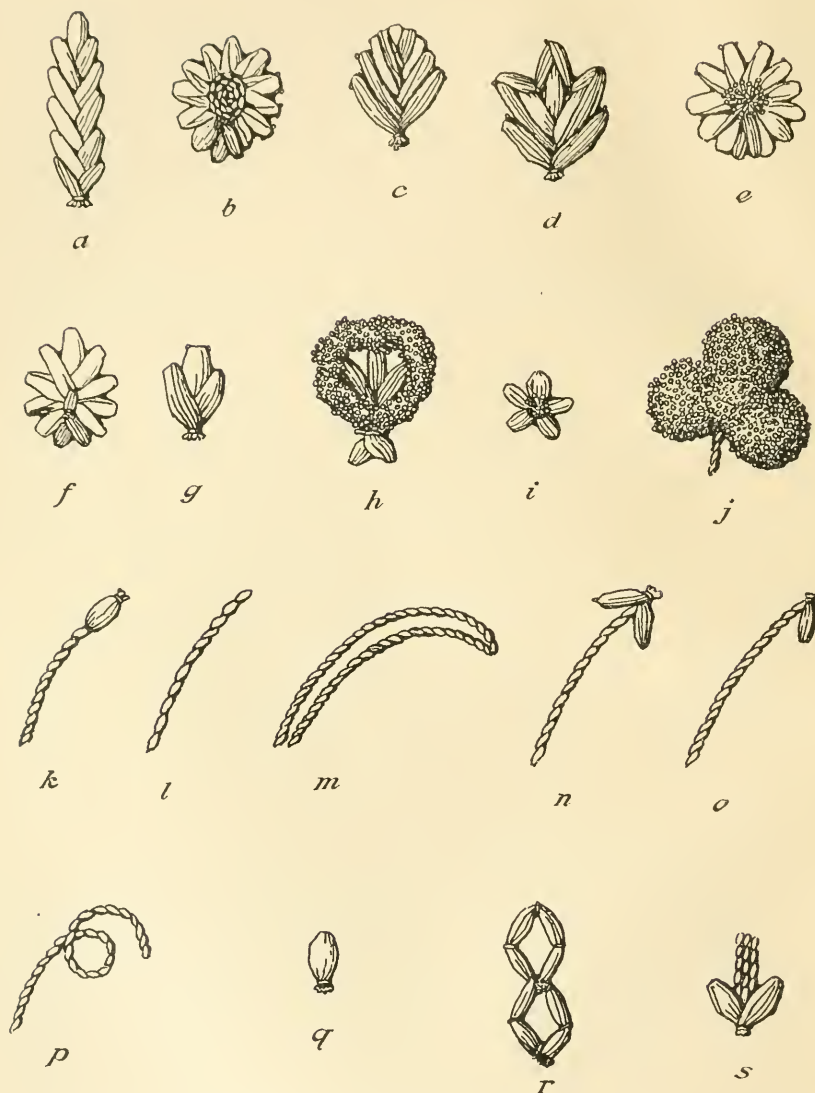


FIG. 6. — Moose hair embroidery figures: *a*, balsam fir; *b*, star; *c*, *d*, cat's paw; *e*, marguerite; *f*, flox; *g*, barberry; *h*, wild chicory; *i*, forget-me-not; *j*, clover; *k*, branch with fruit or bud; *l-o*, dead or leafless branches; *p*, bent branch; *q*, broken branch or stump; *r*, crossed branches; *s*, roots and vegetation around base of tree.

plant. This complex pattern is decidedly a characteristic of the Huron moose hair decorations. The zigzag should perhaps be included in these patterns for it has a definite decorative function as a border although it lacks a realistic interpretation. The zigzag, it appears, is a particularly prominent decorative motive in all eastern Algonkian and Iroquois art. Of the flowers themselves however, the Huron claim the balsam fir, cat's paw, and star to be the oldest. Most of the others, it is thought, are later developments, but at any rate they have been employed commonly as decorative motives since early in the nineteenth century. It will be noticed in comparing the figures of the star, marguerite, and flox, that the difference is determined by the technique in the center, the star having a coil of the simple line, the marguerite having the bristle, and the flox the overlay. In the mind of the Indian artist the idea in these designs is purely realistic, the various elements going to make up the whole plant or tree, as it may be. But strangely, no violence, according to the native eye, is done to the realism by combining such things as a balsam fir trunk and branches with a cat's paw (pl. I, fig. 4). The main idea is said to be to produce variety and a pleasing effect with the few patterns at hand. In regard to the use of different colors there seems to be no regular attempt to reproduce the flowers in their natural hues, with the exception of the clover and forget-me-not. In fact, as will be seen, most of the figures appear in unnatural colors, the balsam fir, for instance, being blue, red, or white as often as green. Not infrequently one figure contains two different colors. The only conventional use of colors, as far as I could observe, seems to be the employment of green for branches and roots.

A more detailed description of a few actual designs taken from specimens will serve better to explain the use and significance of the designs. The figures and their interpretations have been given separately in figure 6. Very characteristic figures are to be found on the vamps of moccasins. The oval forward part of the vamp is always decorated with two or three parallel curves, comprising mixed simple lines and zigzags. The colors employed are usually blue and white, the whole being considered as a Huron tribal mark

of identity (pl. 1, figs. 1, 2, 3, 4). In the enclosed space appears a flower design which is often varied to suit individual fancy. Fig. 3, pl. 1, is an old and typical moccasin pattern, representing the balsam fir, with three green branches alternating with two leafless ones, all having their stems and roots hidden in vegetation. Moccasin 4, pl. 1, is similar to the preceding in all except the cat's paw at the top. Fig. 1, pl. 1, with balsam fir, is also of the same general type varying the leafless branches with dead ones and having the



FIG. 7. — Design from a pouch.

addition of a short branch stump near the top of the figure on the left. The significance of an enclosure or a fence is sometimes assigned to the zig-zag, as here, for example, where it is made to surround a complete tree. The roots and branches in this one are curved. In fig. 2, pl. 1, we have a similar design except that flox replaces the balsam fir. Moccasin patterns do not vary much from the types shown, the chief variations being in cat's paw, star, marguerite, and balsam fir center designs.

The moccasin patterns are the pride of these Indians and display the best qualities of their art. Figure 7, from a leather pouch, may be taken as a typical example of the more elaborate complete figure. The design represents a balsam fir tree with a star above it. Beginning at the top beneath the star we have dead twisted branches, verdant branches, two sets of leafless branches, and the last two repeated with a pair of broken branches between them, until the bottom is reached

where budding branches appear emerging from the two short spurs at the base representing the vegetation around the roots. The long straight line running from the bottom through to the star is a root. The three pairs of spurs along this line represent the nodes where the branches join the trunk. In this design the colors are used irrespective of their real values, the branches and root being green, the balsam firs, red, blue, and white, the star blue and white, and the nodes red. Figure 8 shows another typical design, from a piece

of embroidered caribou skin. It represents uniformly a balsam fir tree with verdant and dead branches alternating, in red, blue, and white, with red nodes where the branches join, with budding branches at the bottom and green vegetation at the roots similar to the preceding figure. A common design on small caribou skin bags for tobacco consists of a tree figure with balsam fir branches alternating with dead branches of type *n*, figure 6, surmounted on the top with the cat's paw, star, marguerite, flox, or wild chicory. Small scissors-holders of caribou skin, for the tourist trade, are

embroidered commonly with disconnected figures of barberry, flox, and crossed branches. These Indians also make buckskin hunting coats with fringed epaulets over the seam of each shoulder upon which the women embroider very attractive designs. Above the fringe, oftentimes of metal dangles with tufts of moose or caribou bristles (figs. 4, 5), there usually appears a zigzag enclosure, following the outline of the epaulet, within which is a tree design surrounded by disconnected figures. Here the balsam fir, cat's paw, clover, and flox seem to be the most used, the whole diversified with various forms of dead or leafless branches. Upon the collar and cuffs of these coats the same designs with zigzag border have been noticed. Wall pockets of caribou leg, with the hair and hoof on, for the reception of pipes are commonly manufactured by the Huron and



FIG. 8. — Typical moose hair design.

their neighbors. The facings of the pockets are usually bordered with the zigzag which encloses designs and figures similar to those placed on the epaulets of coats. Long narrow surfaces, such as belts, bandoliers, moccasin lapels, coat fronts, or legging flaps, the latter from hearsay, are ordinarily decorated with long sinuous lines from which at intervals balsam fir sprays or various flowers branch off. In all such areas of decoration the zigzag takes a very prominent place as a border. A hunting knife case of caribou leg was observed, its buckskin lapel decorated with a series of green balsam fir figures. A headdress band had at intervals separate figures representing pink marguerites, and green balsam firs, the latter quite long, the whole band being bordered above and below with a zigzag. Balsam fir patterns like this in which there were fifty spurs on each side are known to have been made. An old pair of child's moccasins in the Heye collection has a broad flap or lapel decorated with cat's paw figures and branch stumps at intervals, joined together by a waving line or stem. On the vamp the cat's paw forms the central figure with barberries at each side. Outline figures of bow and arrows, tomahawk, and cross are sometimes used as decorations, though these are undoubtedly of quite modern adoption.

In the collection of Mr George G. Heye there is a Huron costume consisting of a sleeved coat, skull cap with tuft of feathers at the top, and leggings, a remarkable example of the moose hair technique (see pl. 11). The entire costume is made of the skin of the harbor seal with the hair side out. On the cap are a series of red cloth diamond cut-outs sewed on the skin. These are decorated with the characteristic Huron zigzags and cat's paw figures. The coat is ornamented on the collar, front facings, cuffs, and lower border all around with hair-embroidered designs on the red cloth foundation. All of these are likewise thoroughly characteristic both in technique and outline. They include the ever-present zigzag, cat's paw, balsam fir, star, flox, daisy, stumps, and roots in various groupings as will be seen from the illustration. A series of ornamental triangular cut-outs about the lower border of the coat is very suggestive of the similarly decorated Montagnais and Naskapi where oftentimes, indeed, even similar painted flower figures appear.

The Huron coat, however, which must have belonged to some chief, is rather exuberantly ornamented with animal figures, horse heads, human heads, and birds on the back, sides, and sleeves. I was told by the Huron that such figures were quite commonly used, although they can hardly be as typical as the simpler flower figures. One of the animal figures, evidently a beaver, the emblem of the Huron,¹ shows very well the solidly embroidered areas (pl. III). The leggings are similarly decorated down the outside, the designs here being cat's paws, balsam fir, floss, stumps, and roots, besides animals, crescents, and ellipses. On the whole this costume is the oldest, and in many respects the most typical specimen showing the moose hair technique, that has so far come under observation.

It appears, in conclusion, that the moose hair appliqué embroidery of this tribe forms an integral part of a widespread northern technique, similar in many respects to quill work. As to the flower designs, about the origin of which at present very little in general is known, it seems that with the Huron at least three are native. From this it may be expected that, upon investigation, certain elements at least of the flower patterns in the art of other northern and eastern tribes may likewise be found to be native.² As regards the relationship between the moose hair technique and the realistic names, I think the latter are purely secondary in origin, the design having acquired names from their resemblance, in the native eye, to certain familiar objects. To judge by the appearance of these non-geometrical designs, plant and flower likenesses would be most naturally suggested. The occurrence of the evergreen balsam fir as the chief name and figure corresponds to what is found among

¹ Cf. also J. A. Maurault, *Histoire des Abenakis* (Sorel, 1866), p. 227.

² Evidences of the early use of flowers, as decorative motives among the New England Indians are to be found in some of the colonial accounts; cf. Willoughby "Textile Fabrics of the New England Indians," *Amer. Anth.*, vol. 7, p. 88, quoting Gookin; also "Dress and Ornaments of the New England Indians," *ibid.*, pp. 502, 508. Also as an example of apparently indigenous flower designs among the central Algonkian, mention might be made of the conventional but quasi-realistic trailing arbutus figure in its quill decorations on birch bark boxes of the Michigan Potawatomi. With these people the arbutus is known as the "tribal flower," according to the late chief Simon Pokagon. Cf. "*Ogimawkwe mitigwaki*" *Queen of the Woods*, S. Pokagon, p. 155-9 (Hartford, Mich., 1899).

Indians of other regions, where the pine, for instance, occurs as a motive both in California and on the Plains. From an early beginning with only three or four plant names the Huron appear to have developed their art by inventing certain new flower figures and modifying some of the old conventional ones and giving them new plant names. So, it is claimed, representations of exotic plants such as forget-me-not, flox, and others, have crept in as motives in modern times making the technique less prominent than the attempt at realism so far as the decorative idea in the mind of the native artist is concerned.

As an early result of investigations now being carried on among the northeastern Algonkian tribes, I find incidentally that the first three figures of the Huron set, fig. 6 (*a*, balsam fir; *b*, star; *c*, cat's paw) also occur in the incised designs of the St Francis Abenaki, Penobscot, Malisit, and Micmac. Furthermore the figure known as *balsam fir* by the Huron goes under the name of *tree* among the Penobscot where it is exceedingly common in their exquisite decorative wood carving. Identical figures are to be seen on the skirts of painted buckskin coats from the Naskapi Indians of the Labrador interior,¹ and another figure identical with the Huron *barberry* occurs on another Naskapi coat in the American Museum of Natural History, N. Y. It is evident that these figures had a wide distribution among the northeastern Algonkians with whom they were shared by the Huron, if not altogether borrowed by them.²

UNIVERSITY OF PENNSYLVANIA MUSEUM,
PHILADELPHIA, PA.

¹ Cf. Turner, "Ethnology of the Ungava District," *11th Annual Report Bur. Amer. Ethnology*, p. 282, fig. 88.

² I have recently seen two specimens of the moose hair embroidery among the Penobscot, the figures and technique of which are identical with those of the Huron. Moreover, both Mr Mechling and myself have independently encountered the same technique and designs among the Malisit of St John River.

SOME ASPECTS OF NOOTKA LANGUAGE AND CULTURE¹

By EDWARD SAPIR

INTRODUCTION

THE two brief sketches that follow are based on linguistic and ethnological material collected during September to December of 1910 among two tribes of the Northern Nootka of Barkley Sound and Alberni Canal, the *Ts'icyā^hatH^a* and *Hopá-tc!as^satH^a*,² now living at the head of Alberni Canal and on the banks of Somass River, in the neighborhood of the present town of Alberni. During the time spent among the Nootka Indians a few points were studied with relative fulness, though at best only a beginning was made even for these, while many other points of great importance were only touched upon. In the present paper two matters of considerable interest in regard to the linguistic and cultural affiliations of the Nootka and Kwakiutl are somewhat hurriedly discussed. The full presentation of the facts involved is reserved for future publications. It should be added that the wolf ritual was witnessed by the writer.

1. THE LINGUISTIC RELATIONSHIP OF KWAKIUTL AND NOOTKA

The Wakashan linguistic stock is divided into two main branches, the Kwakiutl and the Nootka or Aht; the former embraces Kwakiutl proper, Xaisla, and Hē'tsa^q, the latter Northern Nootka (from about Cape Beale north to Cape Cook on the west coast of Vancouver Island) and Southern Nootka or Nitinat (south of Cape Beale to Cape Flattery). By careful comparison of the two Wakashan branches one can in part reconstruct a Wakashan "Ursprache," but the actual differences between Kwakiutl and Nootka are in fact very great; they differ perhaps as much as Slavic and Latin.

¹Published by permission of the Geological Survey of Canada.

²Boas' and Swanton's phonetic system is used with some modifications for the vowels. *i*, *e*, and *o* are short and open, thus corresponding to their *î*, *ê*, and *ô*; *ĩ*, *ẽ*, and *õ* are short and close, and correspond to their *i*, *e*, and *o*; *ĩ*, *ê*, and *ô* are long and open, *ê* being equivalent to Boas' *ä*. Superior vowels used with *H* denote vocalic timbre.

As regards phonetics, Kwakiutl and Nootka, while both showing characteristic Northwest Coast features, differ rather considerably. The sonant or intermediate stop series of Kwakiutl is absent in Nootka, Kwakiutl *p* and *b* for instance being replaced by Nootka *p*. Besides the *s*-series, which Kwakiutl and Nootka possess in common, Nootka has a *c*-series, which is doubtless derived from the Kwakiutl and Wakashan *k*'-series, which in turn Nootka lacks; thus Kwakiutl *g*' and *k*' are cognate with Nootka *tc*, *k*'! with *tc*!, and *x*' with *c*. There is no *l* in Nootka, *n* corresponding to both Kwakiutl *l* and *n*. The velars *q*! and *x*, while somewhat infrequently found in Nootka, are not the regular Nootka representatives of Kwakiutl *q*! and *x*; *q*! has developed into a peculiarly harsh and choky glottal stop, which I write ^ε, *x* into a strangulated-sounding *h* which I write *H*, these two consonants respectively resembling Arabic 'ain and ḥâ; ordinary ^ε and *h* are also frequently found in Nootka. As regards phonetic processes, Kwakiutl and Nootka agree in allowing no initial consonant clusters in words; initial Kwakiutl and Nootka ^ε*m*, ^ε*n*, ^ε*w*, ^ε*y*, and Kwakiutl ^ε*l* are undoubtedly related to ordinary Kwakiutl and Nootka *m*, *n*, *w*, *y*, and Kwakiutl *l* as are Kwakiutl and Nootka *p*!, *t*!, *k*!, *L*!, *ts*!, *q*!, Kwakiutl *k*'!, and Nootka *tc*! to non-*fortis* Kwakiutl and Nootka *p*, *t*, *k*, *L*, *ts*, *q*, Kwakiutl *k*', and Nootka *tc*. In both Kwakiutl and Nootka certain derivative suffixes "harden" the final consonant of the stem; thus *p*, *q*, and *t*, become Kwakiutl *p*!, *q*!, and ^ε*l*, Nootka *p*!, ^ε, and ^ε*y*. The "softening" of Kwakiutl seems to be represented in Nootka by but a few stray phonetic processes. Syllabically final glottal stops and glottally affected consonants—such as ^ε*t* and ^ε*p*!,—which are common in Kwakiutl, are entirely absent in Nootka. Medial and final consonant clusters are not as freely allowed in Nootka as in Kwakiutl, *i* often serving in Nootka to lighten them (cf. Nootka *-qEmiṭ*, "round thing," with Kwakiutl *-gEmṭ* "mask"). All final vowels and stopped consonants in Nootka are aspirated. Peculiar to Kwakiutl is the change of *k*-stops to spirants (*x*, *x*", *x*') before consonants, whereas in Nootka they remain; in this point Nootka seems more archaic than Kwakiutl.

In general morphology Kwakiutl and Nootka are quite similar,

despite numerous differences of detail. In both the stem is, as far as its meaning allows, indifferently verbal or nominal and one or more suffixes are required to give rise to definitely verbal or nominal complexes; in Nootka a suffixed $-^{\varepsilon}i$ is often used to substantivize a verb form. Both Kwakiutl and Nootka are absolutely devoid of prefixes, most of the elaborate grammatical mechanism being carried on by means of suffixes, to a lesser extent by means of initial reduplication, and, in Nootka, consonantal changes. The suffixes of Nootka and Kwakiutl express similar ideas and are used in more or less parallel fashion, though the number of suffixes that are etymologically related form but a small percentage of those found in either; so far about ninety Nootka suffixes have been discovered that are entirely or in part cognate to Kwakiutl suffixes. Examples of local suffixes shared by Kwakiutl and Nootka are: Kwakiutl $-\bar{o}^{\varepsilon}y\bar{o}$ "in the middle," Nootka $^{\varepsilon}win'$; Kwakiutl $-n\bar{e}q^u$ "in the corner," Nootka $-nikw-$; Kwakiutl $-at\bar{u}s$ "down river," Nootka $-atis$; Kwakiutl $-ts.\bar{o}$ "in," Nootka $-ts.\bar{o}'$; Kwakiutl $-k.E$ "top of a box," Nootka $-tct'$ "full"; Kwakiutl $-!a^1$ "on the rocks," Nootka $-!a^{\varepsilon}a'$; Kwakiutl $-\bar{e}s$ "on the beach," Nootka $-is$; Kwakiutl $-\bar{u}t$ "in the house," Nootka $-it'$; Kwakiutl $-xs$ "in a canoe," Nootka $-qs, -!ahs$. A few examples of body-part suffixes are: Kwakiutl $-\bar{l}\bar{o}s$ "cheek," Nootka $-as$; Kwakiutl $-x\bar{o}$ "neck," Nootka $-as-Haut$ "chest"; Kwakiutl $-\bar{a}p!$ "neck," Nootka $-\bar{a}p!at$ "back." Important temporal elements held in common are: Kwakiutl $-L$ "future," Nootka $^{\varepsilon}\bar{a}q-L, ^{\varepsilon}iL$; Kwakiutl $-x.^{\varepsilon}\bar{z}d$ "inceptive," Nootka $-ci-L$. There are some striking agreements in verbifying derivative suffixes, as: Kwakiutl $-\bar{l}\bar{e}xst$ "to desire," Nootka $-\bar{l}iH^a$ "to try to get," $-st!iH^a$ "to have as goal"; Kwakiutl $-\bar{l}a$ "to go in order to," Nootka $-\bar{l}as$; Kwakiutl $-k!\bar{a}la$ "to make a noise," Nootka $-\bar{e}en'$ (= Wakashan $*-q!Ela$); Kwakiutl $-g.a^{\varepsilon}t$ "beginning of a noise," Nootka $^{\varepsilon}aL$ (= Wakashan $*-q!a^{\varepsilon}t$); Kwakiutl $-q!Es$ "to eat," Nootka $-\bar{l}is$; Kwakiutl $-nu\bar{k}^u$ "to have," Nootka $-nak'$. Examples of nominal suffixes are: Kwakiutl $-aan\bar{o}$ "rope," Nootka $-\bar{a}^{\varepsilon}nu\bar{k}$ "long"; Kwakiutl $-gas$ "woman," Nootka $^{\varepsilon}ags$; Kwakiutl $-asd\bar{e}$ "meat," Nootka $-act'$ "dried meat"; Kwakiutl $-mis$ "useless," Nootka $-mis$ "mass"; Kwakiutl $-p!\bar{e}-q$

¹1 denotes a "strengthening" of the preceding consonant.

"stick, tree," Nootka *-p'ɪl* "long board-like object," *-q-* "tree"; Kwakiutl *-(x)^εEnx* "year, season," Nootka *-q^εitɕH* "year," *-!itɕH* "season." On the whole it seems that Nootka has a rather larger number of derivative suffixes than Kwakiutl, many quite special ideas being expressed by means of suffixes where there seem to be no Kwakiutl equivalents. A few examples are *-at* "blanket"; *-^εmit* "son"; *-as* "daughter"; *-!itut* "to dream of"; *-!ō^εil* "to ask for as a gift in a girl's puberty ceremony"; *-!ōtā* "to give a potlatch for"; *-yaqH* "to sing a song"; *-!iL* "to begin to sing a song"; *-!iml* "to give a feast of"; *-Hā* "to buy."

Both Kwakiutl and Nootka make use of two kinds of reduplication, one in which the first consonant, first vowel, and second consonant of the stem are repeated, and one in which only the first consonant and vowel are repeated; the former type is employed in forming iteratives, the second in forming plurals or distributives and with certain suffixes (such as Kwakiutl *-!a*, Nootka *-!as* "to endeavor, to go in order to"; Kwakiutl *-^εyāla* "to go to look for"; Nootka *-!ih* "to try to get"; Nootka *-k!qk^u* "to look like"). In Nootka the repeated vowel is in all cases the same as that of the stem, in Kwakiutl the second type of reduplication has a definite vocalism (*ē* in some cases, *ā* in others) in the reduplicating syllable. In Kwakiutl verb stems ending in vowels insert *x* after the first, *k* after the second syllable of the iterative, while Nootka iteratives of like form insert *L* and *y*; Nootka *sā-* "to crawl" forms iterative *sā'LSātɕ*, *-tɕ* being probably identical with Kwakiutl *-k*. One other striking resemblance of detail between Kwakiutl and Nootka may be noted: both Kwakiutl diminutives in *-Em* and Nootka nouns in *-kwin* "toy" require reduplication of the stem.

In regard to pronominal development there is considerable difference between Kwakiutl and Nootka. While there is, practically speaking, but one series of personal pronominal suffixes in Kwakiutl, there are three in Nootka (represented, for second person singular, by *-e^εits*, *-k'*, and *-sqk'*), of which the second and third are etymologically related; the first Nootka series is used in indicative forms of verbs, the second in subordinate clauses, interrogatives, and possessive forms of nouns, while the third seems to be confined to

certain modal forms. Kwakiutl has distinct forms for first person plural inclusive and exclusive, while Nootka has only one form for both. Pronominal objects are, to at least a considerable extent, incorporated in Kwakiutl, in Nootka, however, only in the case of the first person (second series) of the imperative. A great degree of complexity in pronominal forms is brought about in Kwakiutl by the combination of the pronominal affixes with syntactic (subjunctive, objective, and instrumental) and demonstrative elements. Nootka has none of this syntactic and demonstrative complexity of the pronoun, but a series of forms is found built up of the second pronominal series and an element *-tc* implying that the statement is not made on the authority of the speaker.

Almost all Nootka and Kwakiutl words are noun or verb forms, there being almost no particles properly speaking. Such apparent Nootka conjunctive and case particles as *°ōnōL* "because," *°oyi* "when, if," and *°ōkwil* "to" are morphologically verb forms built up of a stem *°ō-* "a certain one, thing" and derivative verbifying suffixes. There is, however, in Nootka a syntactically important conjunctive element *°ani* "that" to which may be appended pronominal affixes of the second series and which may perhaps be considered a particle in the proper sense of the word. The "empty stem," Nootka *°ō-*, is cognate with Kwakiutl *ō-* "something" which, however, is used primarily in noun forms. Other Wakashan "empty stems" are: Nootka *°aps-*, *°am-*, Kwakiutl *āps-*, used chiefly in forming nouns of body-parts that occur in pairs, and Nootka *hīl-*, *hī-* "to be at," Kwakiutl *hē-* "that"; peculiar to Nootka is *hīn*, *hīl-* (before "hardening" suffixes) "to be *or* do (as indicated by derivative suffix)."

In regard to vocabulary Kwakiutl and Nootka differ greatly. Considering the very striking morphological agreements between them it is somewhat disappointing to find comparatively few stems held in common. It is highly important, however, to note that many of these are rather colorless in content and thus hardly to be suspected of having been borrowed in post-Wakashan times. Such are Kwakiutl *°nā-*, Nootka *°nās* "daylight"; Kwakiutl *g'āl-*, Nootka *tcān-* "to be first"; Kwakiutl *ax-* "to do, be," Nootka *°oh-* "to be";

Kwakiutl *wē-*, Nootka *wi-*, *wik'* "not"; Kwakiutl *gē*, Nootka *qē* "a long time"; Kwakiutl *^enem-*, Nootka *^enup-* "one"; Kwakiutl *gwē-* "thus," Nootka *qwi-* "to be or do thus"; Kwakiutl *sō-*, Nootka *sō-* "you"; Kwakiutl *ēk!-*, Nootka *^eitc!-* "above." Thus Dr Boas' first announcement in 1890 of the close relationship between Kwakiutl and Nootka has been confirmed in every way by new evidence.

II. THE NOOTKA WOLF RITUAL

The Nootka of Barkley Sound have two important public rituals, a doctoring ceremony known as *ts!ā'yeq'* or *ts!āts!ā'yeqc* and a wolf ritual held in winter known as *Lōkwā'na'*. The former ceremony is not known to the more northern Nootka tribes and seems to have been borrowed from the Coast Salish of eastern Vancouver Island; the latter has been profoundly influenced by the winter ceremonial of the Kwakiutl: the Nootka names seem to be derived from Kwakiutl *ts!ē'qa* or *ts!ē'ts!āēqa* "winter ceremonial" and *Lō'gwala* "wolf dance." A long origin legend of the *Lōkwā'na'* was secured which localizes that ceremony in the country of the *Yul-ā'tl^eatH^a* (Uchuelet), one of the tribes of Barkley Sound; it tells of a young man who went among the wolves in order to obtain from their chief the magic war-club with which to deal death to his enemies and who, having witnessed the *Lōkwā'na'* among the wolves, introduced it into his tribe on his return. A wolf ritual is always given in connection with some sort of potlatch, and those invited to the latter are not supposed to know that a *Lōkwā'na'* is about to take place. The man who runs and pays all the expenses of the *Lōkwā'na'* is generally the father or other close relative of one of those to be initiated into the tenets of the wolf ritual, though others not related to him are, as a rule, also to be initiated. The wolf ritual may be briefly described as a dramatic performance representing the capture of the novices by the wolves, their recapture from the wolves, the exorcism of wolf spirits that they bring back with them, and the performances of dances that the novices are supposed to have been taught by the wolves. The exact details of the course of the ritual differ according to the tribe and family traditions of the *Lōkwā'nap'* or giver of the *Lōkwā'na'*.

At some point in the potlatching and feasting of the first evening the lights are suddenly put out and four wolves are dimly seen scampering about and whistling furiously. The particular color or decoration of these wolves depends on the *topā'ti'* or inherited privilege of the *Lōkwā'nap'*. At the same time there is a terrible uproar on the part of the people, who simulate fear, and all the singing of gift songs and other forms of merriment cease. From now on all pretend to be in constant fear of the wolves, and those not yet initiated or not to be initiated at that *Lōkwā'na'* are told that genuine wolves have invaded the village. When light is restored, the wolves have disappeared and with them certain of the novices. After a while the four wolves again appear and, when order is again restored, the rest of the novices are found to have disappeared. Pretended efforts are made to find these, curses are hurled against the wolves, and a trap is set to capture them; the right to give this trap is a *topā'ti'* of a particular family. During the night and at various times during the three days following wolves are heard to howl and whistle and, from time to time, are seen along the edge of the woods at some distance from the village. The number of wolves used in the ritual for this purpose differs again according to the *topā'ti'* of the *Lōkwā'nap'*, some families claiming the right to use fifty or even sixty wolves. Only a certain number of men in the tribe have the inherited right to "play wolf," though, as in the case of practically all inherited privileges, the actual performance of the *topā'ti'* may be deputed, with payment for vicarious service, to others not so entitled. Each line of descent that transmits the privilege of playing wolf is characterized by its special *topā'ti'* of wolf decoration in black and white and has its secret medicines for painting the face black and for warding off evil consequences of the curses of the people. The manner in which the wolves move about, the order in which they come out of the woods, the direction in which they turn, and the number of times they appear are all rigidly determined; the howls of the wolves also are conventional in character and are not intended accurately to reproduce real wolf howls. Three distinct types of whistle are employed by the wolves, the sounds made by which may be spec-

tively described as resembling a squeak, a quacking noise, and the sound of a bugle; they are all constructed of two pieces of slightly hollowed out wood which tightly fit together and are wrapped with wild-cherry bark. Four of the wolves are messengers, each bearing his special name, and scamper about somewhat apart from and more hurriedly than the rest; one of the wolves is abnormally large and is supposed to be the pack-wolf; a sixth is lame and howls *hīhō* for long stretches of time, the assumption of this last rôle being the *tōpā'ti'* of a particular family.

During the four days that the novices are absent they are supposed to be the captives of the wolves; in reality they are, or rather were, kept at a house in the woods which is tabooed to the uninitiated. The wolves, when not "on duty," dress as ordinarily and return to the village to mingle with the rest, by whom they are not supposed to be recognized as the impersonators of the wolves. At certain times the chief of the tribe exercises his jealously guarded *tōpā'ti'* of singing a special *ts'ī'qa'* song intended to call out the wolves and have them bring the novices to view; *ts'ī'qa'* songs are a class of songs of solemn chant-like character accompanied, during the *Lōkwā'na'*, by rapid rattling, at other times by rapid drumming. After the singing of this song the wolves appear and also the novices are seen to come out in a prescribed order at the edge of the woods; they wear hemlock branch ornaments and wave hemlock boughs in their hands. Whenever the wolves are heard howling or are seen, many of the people sing *ts'ī'qa'* songs referring to the *Lōkwā'na'*; these differ for different lines of descent, and, as each person rattles and sings his own *ts'ī'qa'* regardless of all others, the resulting din can be easily imagined.

On the afternoon of the third day of the ritual some men set off in canoes across the river with the ostensible purpose of seizing the novices from the wolves. This ceremony is known as *ᵐmātskwī'e'L* "to go in order to get the remains (*i. e.*, torn clothing) of what has been bitten (and carried off in the mouths of the wolves, *i. e.*, of the novices)." The novices themselves are known as *ᵐmē'ᵐat* "those who have been bitten (and carried off in the mouths of the wolves)," the Nootka metaphor of the "biting and carrying off by the wolves"

of the novices corresponding to the Kwakiutl one of their "disappearance." The canoemen return baffled; they have skirmished with the wolves at the edge of the water but have found it impossible to wrest their captives from them. On the afternoon of the fourth day takes place a ceremony known as ^e*mākwa^ei^eH^a* "to try to get what is held in the mouths (of the wolves)." It is a fairly elaborate out-of-doors performance, consisting of frequent singing of *ts!i'qa'* songs, of the appearance at various times of the wolves and novices, of the "acting crazy" (*qeqe'cap'qa'*) of various groups of men and women, and of the steady approach of the row of people towards the wolves while singing a ritualistic song intended to please the latter. Several times men are sent out to lie in wait for the wolves and to shoot at them at their approach (^e*ē^eeL*), attempts are also made to trap the wolves (*qā^emiL*), but all to no effect. Finally, as many men are deputed with ropes as there are novices; they advance towards the wolves and, on the last appearance of the novices, they lasso these and succeed in fighting off the wolves. The lassoing of the novices, it should be added, is a *topā'ti'*. All now return with the novices, who are led by the ropes and who are continually whistling with whistles concealed in their mouths, to the house. The whistling noise is supposed to be produced by the wolf spirits that have entered the bodies of the novices. These spirits are known as *Héi^ena'*—cognate with or borrowed from Kwakiutl *xwē^ela*,—and are represented by pieces of quartz or, nowadays glass. The novices are taken to the back of the house, still whistling; they are now called *qaHákwit* "dead in the house." The greater part of the evening is taken up by a peculiar *ts!i'qa'* ceremony. A certain number of men and women, who have inherited this *topā'ti'*, arise and sing simultaneously each his or her own *ts!i'qa'* song, accompanying themselves with rattles; at the same time another man, who is also exercising a *topā'ti'*, drums loudly and rapidly; this singing, rattling, and drumming, across the terrific din of which may be constantly heard the clamorous whistling of the novices, lasts several hours. The purpose of the ceremony seems to be to appease the wolf-inspired novices.

Before noon of the following day two important ceremonies are

performed. The first of these is the *tc!iH^awās^sap^a* "driving of ghosts (i. e., wolf spirits) out of the house" and is practically a form of exorcism. It is the most sacred part, at any rate the part most strictly tabooed to the uninitiated, of the whole wolf ritual and after its completion the wolves as such cease to play a part. Two men, whose *topā'ti'* the office is, blacken the faces of all the people, who sit in the rear and at the sides of the house and who have been provided with beating sticks. Two other men, who do so in virtue of their *topā'ti'*, have themselves dressed up in bear skins and erect headdresses of branches and hold rattles in their hands. The actual exorcism consists in the singing of ritualistic songs and uttering of certain noises and yells, in accompaniment to which the people beat time in various rhythms, while the exorcists perform four peculiar counter-clockwise dances, at the same time accompanying themselves with rattling. As a result of this exorcism the *Héi^sna'* of the novices leave their bodies and fly into the hands of the exorcists; at the same time the whistling of the novices ceases entirely. All, except the novices, who are still in the rear of the house, now proceed to the water's edge. The exorcists alternately dip their clasped hands down to the water and raise them above their heads, the *Héi^sna'* jutting out in the form of quartz or glass. At the fourth raising of the hands the *Héi^sna'* are supposed to return to their original owners, the wolves, who at that identical movement howl a single time. The novices are thus exorcised, but their blood has been contaminated by the presence of the *Héi^sna'*; hence a purification ceremony known as *k!wíxā'* "sucking" is now performed, the term "sucking (out the bad blood)" being merely a metaphor. Certain men, quite or nearly naked, proceed to bathe in the winter-cold water of the river; they have blood streaming down from their mouths and each is held by means of a rope by another man who follows the former wherever he goes. The bathers stay in the water as long as they can endure the cold; then they are carried back by others into the house, being supposed to have become frozen stiff; they are revived by the utterance of formulaic yells.

On the evening of this day and of the three days following the novices, assisted by others, dance a series of dances known as

^εq̄c̄i^εnak' "pretending to be somebody." Each novice has a particular dance assigned to him or her, the assignment depending to some extent on the *topā'ti'* of his or her family; there are not more of these dances performed than there are novices, though the total number of ^εq̄c̄i^εnak' dances known is very large, perhaps more than seventy-five. As each line of descent has the right to perform a large number of such dances and as the great majority of the dances seem to inhere in many lines of descent, the *topā'ti'* element in these dances does not impress one as being very clearly marked, though undoubtedly present. The assistants of the novice are always of the same sex as the latter; if the novice is a child unable to perform the dance, it may be carried on the back of an older person who takes its place. The dances may be divided into three categories: those representing supernatural beings, those intended to imitate animals, and those dramatizing various activities. Examples of the first class are the dances of the thunder-bird, which differ from the thunder-bird dance given in potlatches at other times of the year; the *Hē^εiL'iik'* or lightning serpent, who dances as the "belt" of two thunder-bird dancers; ^εá^εmaq'oH", who corresponds to the fool dancer of the Kwakiutl; the *sā^εnak'*, a sort of supernatural wolf dancer, whose dance seems to correspond to the ^εwālas^εaxá of the Kwakiutl; *po'kumis*, supernatural spirits transformed from those who have frozen to death; and *nō'tim'*, creatures of the woods who walk about stealthily and carry painted wands. The animal dances comprise a very large number, a few of which are the dances of the panther, wolf (*q̄wáyetsi^εnak'*), wasp, red-headed woodpecker, devil-fish, and saw-bill duck. Some of the dances that illustrate activities are those of the archers, women who go berrying, those who look idly upon one that is making a canoe, those who talk secretly in whispers to one another, men who sit about lazily on their summer seats in the morning, and young men who signal to girls to follow them into the woods. The Kwakiutl *hā'mats!a* has quite recently been acquired by a few families of the Nootka of Barkley Sound from Nootka tribes farther north who are in close proximity to the Kwakiutl; it is of only secondary importance among the Nootka. Each dance is performed four times in a counter-clock-

wise circuit; a few of the dances, such as the $\text{á}lmaq'oh^\circ$, are danced by a single man, others, such as the thunder-bird and wolf dances, by two who dance towards and away from each other, while in the larger number of dances an indefinite number participate. The ceremonial paraphernalia used in the dances are face, head, and forehead masks, though in many no masks are used, red-dyed cedar-bark head rings and attachments to masks, face paintings of many kinds, and many other less easily classified objects or insignia that are characteristic of particular dances. The face mask seems to be particularly characteristic of $\text{á}lmaq'oh^\circ$; head masks, though now employed in many $Lōkwā'na'$ dances, are said to have been originally used only for the $sā'nak'$. The dances, it should be noted, are repeated in the same order each of the four evenings. Some of the $q̄cī'nak'$ dances have special songs that go with them and are the $topā'ti'$ of particular families, others are accompanied by the singing of a set of $ts'í'qa'$ songs known as $ts'í'ak'Lim'$ " $ts'í'qa'$ songs that follow behind"; all of these dances are preceded by the singing of $ts'í'qa'$ songs.

The $q̄cī'nak'$ dances practically conclude the ritual. On the morning of the fourth day thereafter a ceremony known as $ā'tscīL$ "to go out fishing or hunting" takes place. The novices, who are supposed to have procured food for a feast, are paddled down stream in a canoe while the paddlers from time to time utter a formulaic $ā +$. At a certain point the novices jump out into the water and, as they hold on to the canoe, are paddled to shore; they are supposed to be frozen stiff and have to be revived. After the feast, really provided by the parents of the novices, the set of $q̄cī'nak'$ dances is once more gone through. A year later a short $Lōkwā'na'$ known as $hō'atst'ōp'$ takes place; it lasts only one day, and its main features seem to be wolf howling and the dancing of the $q̄cī'nak'$ dances of a year before.

Such, in bare outline, is the course of the Nootka wolf ritual. It should be remarked, however, that not all the time is taken up with set ritualistic doings, but that potlatching, including the singing of $Lōkwā'na'$ potlatch songs, is constantly going on; the elaborateness and fulness of the actual ceremony depend to a large extent

on the amount of property and money that the *Lōkwā'naḡ* is prepared to give away. A good deal of subsidiary buffoonery and "acting crazy" are indulged in by the various *ḡpā't*. These are non-hereditary clubs which, to some extent, are named according to various tribes; the women are formed into two such clubs, the Bluejays and Sea-gulls. These clubs, which have their songs, paints, and distinctive feasts, are not, however peculiar to the *Lōkwā'naḡ*, but operate as well in potlatches during the rest of the year; thus the *ḡpā't* are far from representing, as Dr Boas was inclined to believe, a breaking down during the *Lōkwā'naḡ* of the ordinary social system of the tribe, a state of affairs that would be comparable to the change among the Kwakiutl from *bā'xus* or "profane season" to the winter ceremonial season. The *ḡpā't* are said to have originated among the Nootka of Alberni Canal and to have been imitated latterly among other Nootka tribes.

One of the most striking facts about the wolf ritual of the Nootka is the frequent exercise of inherited privileges at various points of the ritual. This, however, is by no means distinctive of the *Lōkwā'naḡ* alone but is a trait that permeates all phases of Nootka life. The intensely sacred, even austere, character of the ritual as performed in earlier days is somewhat less in evidence now; the more savage features, such as killing of slaves, dog eating, and self-torture, which at least sometimes originally entered into the latter part of the ritual, have necessarily been ruled out of late. Police officers were charged with the duty of seeing that all the taboos and usages of the ritual were carefully observed and punished with rigor, in certain cases with death, any infringement, such as failure to have the face painted black; those guilty of smiling or gum-chewing had their mouths slit more open.

The close historic connection between the wolf ritual of the Nootka and the winter ceremonial of the Kwakiutl is easily proved and indeed quite obvious. It may be going too far, however, to say that the Nootka borrowed the entire ceremony from their northern neighbors. The fact that the wolves play such a highly characteristic and specialized part in the Nootka *Lōkwā'naḡ* and that the origin of the ritual is so persistently localized in the region directly

north of Barkley Sound (according to Swan the Makah of Cape Flattery also derive their ritual from this region) make it seem likely that we have to deal with an old and specifically Nootka wolf ceremony that, in course of time, has become profoundly influenced and probably considerably elaborated by the winter ceremonial of the Kwakiutl. It even seems probable that at least one of the wolf dances of the latter is Nootka in origin. At any rate, before the details of the wolf ritual among the more northern Nootka tribes, which are said to be rather different from those above outlined, are known, it is well to refrain from ascribing the Nootka *Lōkwā'na'* to a primarily Kwakiutl origin.

GEOLOGICAL SURVEY OF CANADA,
OTTAWA, ONT.

AN ANCIENT SEPULCHER AT PLACERES DEL ORO, STATE OF GUERRERO, MEXICO

By H. J. SPINDEN

AN archeological discovery of great interest and in a region new to most students of Mexican art was made in June, 1910, by Mr William Niven, of Mexico City. Mr Niven has for years studied and collected the antiquities of the west coast of Mexico, particularly in the state of Guerrero. Representative collections made by him are now in the Museo Nacional of Mexico City, in the American Museum of Natural History, and in the Peabody Museum of Harvard University.

Mr Niven's investigations have shown that the state of Guerrero contains many extensive ruins which bear witness to a large pre-historic population and to a fairly high culture. The numerous pyramids and platform mounds of this region are, however, merely loose masses of natural or roughly cut boulders, and the temples which once crowned their summits are now in utter ruin. Thus, because they lack in spectacular interest, even the most important sites have never been adequately explored. The collections so far gathered consist, for the most part, of occasional finds of small carved stones, either implements or ornaments. The few slight excavations have revealed carved specimens of jadeite, serpentine, and obsidian, as well as objects of gold and copper. The series of remarkable objects that will presently be described is evidence of much higher and more intensified culture than has hitherto been suspected.

The discovery in question was made in the valley of the Rio del Oro, near the mining town of Placeres del Oro, which lies in the municipality of Coyuca de Catalan, on the Rio Balsas, about two hundred miles southwest of Mexico City. The Rio del Oro, rising in the high sierras of interior Guerrero, flows in its upper courses through a deep cañon. A few miles above the town of Milpa

Chica the cañon comes to an end and a broad rolling valley takes its place. Further down the hills close in again. From this point until it reaches the Rio Balsas the stream is tortuous and the valley narrow, with stretches of box cañon.

ANCIENT SITES IN THE RIO DEL ORO VALLEY

A map of this region, based upon data furnished by Mr Niven is shown in figure 9, and upon this he has marked the principal sites of ancient remains as follows:

A. Near the town of San Agustín at the mouth of the river there is a large pyramid about forty feet in height.

B. Opposite the mouth of the Arroyo Viscaino is a pyramid about thirty-five feet in height.

C. On the west bank of the river four hundred yards above the mouth of the Arroyo Viscaino is the ancient site at which was made the discovery of the sepulcher with its mortuary treasures. Here for a distance of several hundred yards the flood force of the stream has been directed against the bases of three pyramids with the result that almost a quarter of the structures has been washed away. A vertical cross-section has thus been made which reveals admirably the earth and boulder construction. The pyramids are of unequal height, the highest rising perhaps thirty feet above the plain. They are flanked by level courts. About a hundred yards west of this line of pyramids there are three others of less elevation and an orderly arrangement of small courts and plazas.

D. In the town of Placeres del Oro there are two pyramids, the smaller of which is located in the cemetery. One of these is about sixty feet in height and the other about forty feet.

E. On the east side of the river, above the Arroyo de Patamba, are boulder ruins of houses. This mass of ruins is bounded on the south by a great pyramid that rises to the height of eighty or ninety feet in four terraces.

F. On the western side of the Rio del Oro and some two hundred yards back from the river there are abundant remains of a large city extending from the Arroyo de Torres to the present town of Milpa Chica in a strip fully four hundred yards in width. The ruins con-



FIG. 9.

sist of small boulder mounds five or six feet in height and laid out apparently with considerable regularity. The site is so thickly overgrown with brush that exploration is difficult.

G. A short distance above Milpa Chica is a pyramid about twenty-five feet in height. There are no ruins of importance in the narrow gorge of the upper river.

According to another authority¹ there are also extensive ruins at Quiríncuaro, which is shown on the map not far from the Rio Balsas. This site lies between two high barrancas on an arroyo that empties into the Rio del Oro from the east. Occasional excavations by the laborers of the hacienda have uncovered relics of the ancient population.

Besides these valley sites, there is, according to Mr Niven, scarcely a mountain ridge in this region which does not show remains of ancient terraces and platforms. It is possible that they belong to an epoch different from that of the lowland ruins.

THE DISCOVERY

After this general survey of the archeological sites of the Rio del Oro valley we must return to the site marked C on the map. Near the base of the most northerly of the three pyramids and on the plain that extends toward the Arroyo Viscaino there is a ring of stones four feet in diameter. The ring is about six feet back from the brink of the wash bank. Just north of it are two lines of boulders, each about three feet wide and extending fifteen feet back from the edge. These appear to be sunken walls, because they extend downwards on the face of the wash bank for fifteen or twenty feet. At a point about twelve feet from the surface and directly opposite the ring of stones, Mr Niven saw the corner of a cut stone slab sticking out of the bank. Digging around this he brought to light an ancient burial.

On top was a plain slab of diorite, smoothly worked but undecorated, with the following dimensions: length forty-two inches, width twenty-four inches, thickness three inches. This slab was lying in a horizontal position, upon another plain slab of the same

¹E. Ruiz, *Michoacan, paisajes, tradiciones y leyendas*, Mexico, 1891, pp. 325-327.

size and material. Under the second slab was a third, measuring twenty-eight inches by eighteen inches by two inches, the lower side being covered with curious sculpture (slab A reproduced in plate IV). About ten inches deeper was a second sculptured slab, thirty-three inches by fifteen inches by one and one quarter inches, likewise lying face down (slab B, plate V). Both sculptured slabs were broken.

Between the two carved tablets were found the following objects:

Two carved shell arm-bands, one entire, the other in fragments.

Two table urns.

One jadeite pendant.

One small metate or paint mortar.

One large cylindrical bead.

A large number of beads of stone and shell in various shapes and sizes.

A number of large shells.

An obsidian core.

Fragmentary human bones and teeth.

There is good reason to suspect that at least partial cremation of the body took place at the time this burial was made. It is, however, pretty clear that cremation was not complete because teeth and some fragments of bone remain. It is significant that the teeth were found in an enclosed space between the legs of a small table urn, where it is hardly likely they would have fallen after the decay of the body. We may be allowed to imagine that there was an elaborate cremation ceremony, such as was customary among the Tarascans.¹ The carved slab B was put in the bottom of the grave and then the hot ashes and smoldering remains thrown in upon it. After other mortuary offerings had been packed in carefully, the carved slab A was placed face down over the burial. This was in turn covered by two plain slabs and then the shaft filled up. The clay walls that enclosed the burial on the sides showed, according to Mr Niven, signs of having been hardened by fire. The carved slabs were both broken into several pieces and the upper

¹E. Ruiz, *op. cit.*, pp. 48-49.

one, which would have been subjected to the greater heat, was damaged by the flaking away of part of the sculptured surface. Many of the shell pieces were very fragmentary. All of these details point towards cremation, yet the fact cannot be regarded as settled.

DESCRIPTION OF OBJECTS

Sculptured slab A (plate IV), presents a complicated design consisting of five heads or faces curiously combined. The upper and principal face is in front view and the other four are in profile. In the lower division of the slab there are two profile heads placed

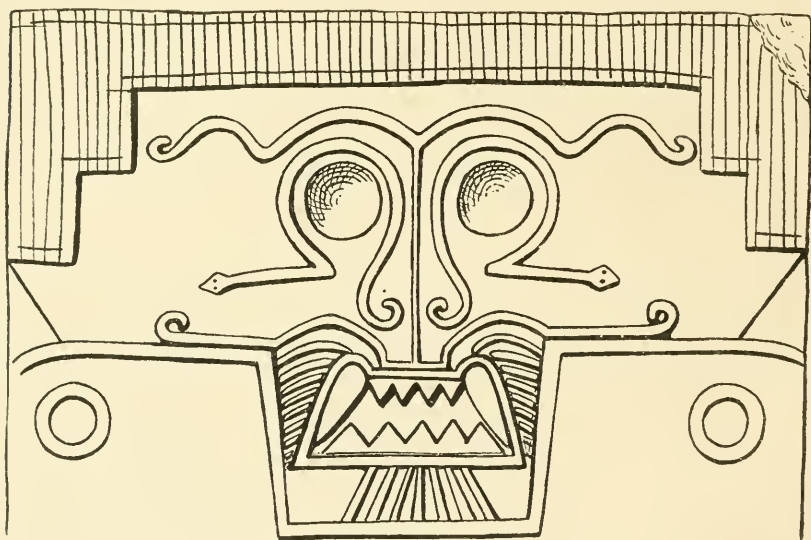


FIG. 10. — Restoration of the face at the top of Slab A.

back to back and facing outwards. Above these and under the principal face there are two other profile heads, having the lower jaws fused together, and facing upwards.

The central portion of the face at the top of the slab has been destroyed by the flaking away of the stone. A restoration of all the lost parts is attempted in figure 10. An examination of the photograph will show that there is little possibility of error, as all the parts are pretty closely indicated in the original. Still a com-

parison with the somewhat similar face on sculptured slab B (plate v) will increase the certainty.

The hair is indicated by incised vertical lines drawn rather close together. It is cut horizontally across the forehead and in receding steps at the side of the face. The eyebrows are represented by an undulating line which is joined at its central point with a line extending along the ridge of the nose to the upper lip. Only the lower portion of this line appears on the original and it must be confessed that the extension upwards as far as the junction of the eyebrows is somewhat uncertain. The eyeballs are sunken pits which contain remains of what seems to be a gum or pitch, possibly copal. Now comes the most remarkable detail of the face. Each eye-socket is almost entirely enclosed by a snake's body which folds over it from the top. The two tails, symmetrically disposed, hang down between the eyes and outline the nose; the two heads shoot outward on tangents from the base of the eyes. The mouth of the grotesque face is open and both jaws have sharply pointed teeth, the upper six and the lower five. The two outer teeth in the upper jaw are much longer and more conspicuous than any of the others. They are set into sockets in the corners of the jaw and the points are turned outward as well as downward. At each side and at the bottom of the mouth are lines that probably represent hair. The chin of this front view face is let down into the open fused-together jaws of the upper pair of profile faces. At each side the ear-plug has been incorporated into the upturned nose of the profile face beneath.

The four profile heads may be briefly described. The two lower ones have a wide open mouth in which appears a device resembling a figure 8 placed horizontally. The elongated nose is bent backward so as nearly to describe a circle. Triangular teeth project from the outer line of this upturned nose as well as from the top, back, and bottom of the mouth. The eye is diamond shaped with the center sunken and is ornamented by three lines which extend from the crown of the head to the top of the eye and then continue below the eye, finally making a right-angled turn backwards. The two upper profile faces are similar to these but are incomplete since they lack the lower jaw and the figure 8 device.

The carving of this slab, as well as that of the next to be described, shows no rounded nor modeled relief, but is flat, and sharply defined, as though the drawing had been made on the smooth stone and then the background slightly excavated on an even plane, to make the masses stand out more clearly. Certain minor details were added in more delicate incised lines. While slab A may be described as a simple rectangular tablet, this will not hold of slab B since its margin has been modified and trimmed down to follow certain outlines of the graven figures.

The carving of the upper division of slab B (plate v), is similar in subject to the same part of slab A and shows a grotesque face rising out of the connected jaws of two profile heads that face upwards. The lower division is quite different, however. This presents a central blank panel bounded at top and bottom by a widened face in front view and framed in on either side by a vertical strip of geometric ornament.

The mass of hair over the forehead of the principal face is unsymmetrically blocked out and has no vertical lines. What may be termed eyebrows are represented in a somewhat complicated manner. An upper portion, resembling an undulating ribbon, is quite similar to the eyebrows of the face on slab A. Below this ribbon, however, and in part paralleling it, are two bodies of snakes curiously but symmetrically disposed, one for each half of the face. The tails of the snakes hang down close together along the ridge of the nose, the ends curling into small hooks. The heads turn sharply inwards from directly over the round ear-plugs and seem to be striking at the large staring eyes of the grotesque face. Two ribbon-like bands outline the eyes and the nose of this complicated visage. The upper band ends in upward pointing hooks just opposite the ear-plugs. It traverses the face horizontally, taking a loop around each eye, and crossing the nose below the two serpent tails. The lower band is directly beneath the upper one, and ends in similar hooks which turn downwards. The middle portion of this ribbon makes two arches over the short spirals that here indicate the nostrils. The mouth has teeth in the upper jaw only, but the long sharp fangs, set in sockets in the upper corners of the

mouth, are in evidence. At the sides of the mouth are groups of lines somewhat similar to those on slab A, but the space for the lines under the chin is merely blocked out and left blank. The last detail to be noted is a narrow strip that forms a long loop and passes across the chin from each side of the mouth.

The two profile heads under the face that has just been described are much simplified. Each has a blunt upturned nose and a diamond-shaped eye. No teeth are shown. A series of figure 8's follows and embellishes the simple outlines of these connected heads.

A moulding, more noticeable than in slab A, divides the tablet into an upper and lower zone. The wide front-view faces at top and bottom of the blank panel in the lower division are evidently made by the juxtaposition, face to face, of two profile heads somewhat similar to those in the upper division. These heads are, however, more complete than the others since each possesses a mouth with sharp teeth in the upper jaw. The strip of geometric ornament, that extends from top to bottom of the lower division of the tablet on the observer's left, consists of a double guilloche that makes seven complete turns. The strip on the right contains a complex of a stepped fret, a progression of oblongs, and a sloping figure eight. The whole complex is reversed once upon the axis of this figure eight.

Next in interest to the sculptured slabs is a pair of carved arm-bands each cut from the flaring end of a triton shell. Fortunately one of these has been preserved entire, while of the second enough fragments remain to show that the carvings in the two were similar, if not identical (see plate VI, *a* and *b*, for photograph and fig. II, *a* and *d*, for drawings). The upper cross-section of the first or complete arm-band is shown in fig. II, *c*, and the lower cross-section in *b*. The opening at the top is circular and has a diameter of three inches. The carving commences at the end of the tangent-like projection and continues around the outer circumference of the shell to the points marked by a V on the cross-sections.

The design on the complete arm-band, reproduced from a rubbing, is shown spread out in figure II, *a*. It begins with a narrow, vertical panel containing three disks, one above the other, somewhat

flattened on the four sides and with concentric markings, and it ends with a wider panel in which is shown an eye having a curious hook-like appendage, that hangs down and curls forward. Between these terminal panels there are represented four monkeys in profile, each with his hand before his face, and his uplifted tail curling in a spiral behind his head. The monkeys look alternately in opposite

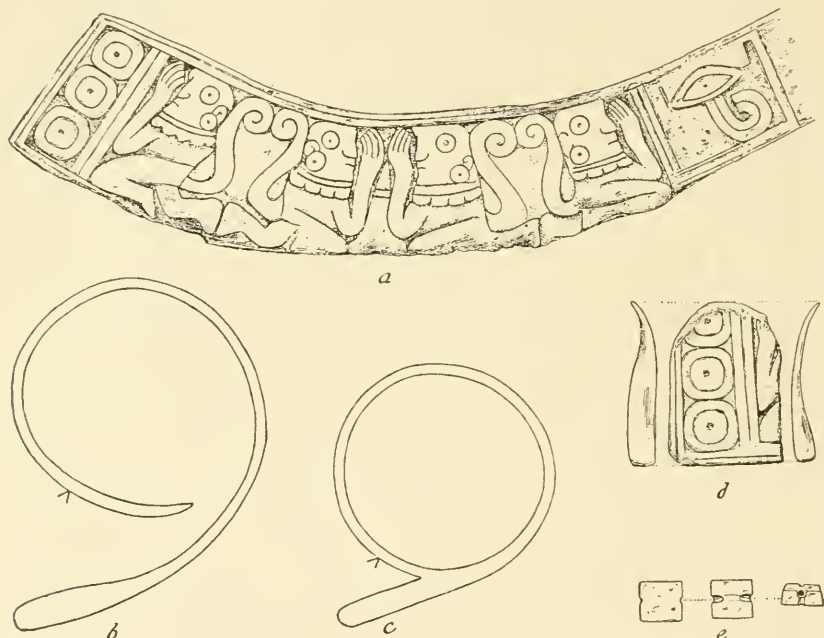


FIG. 11. — Objects made of shell; *a*, design on shell bracelet; *b* and *c*, lower and upper cross-sections of shell bracelet; *d*, fragment of second bracelet; *e*, details of shell buttons with hidden eye.

directions, the two center ones being face to face. This symmetrical arrangement greatly increases the decorative effect. The posture is peculiar and may be intended to indicate running. Both knees are bent and the lower legs are in a horizontal position, but one knee is placed forward and the other backward so that the legs are widely separated. Each monkey wears a circular ear-plug and a simple neck-band. The fragment of the second arm-band (fig. 11, *d*) shows the three disks and the knee and arm of the first monkey figure.

The first and larger table urn (see plate vi, *v*, for photograph and fig. 12, *a*, for drawing) measures seven inches in length, two inches in width, and four inches in height. It is broken into two pieces. The material is a diorite that has a decidedly bluish tinge on the fracture. There are four short rectangular legs on the bottom and two oblong shallow basins on the top. The object has been called a table urn for want of a more specific name and knowledge of its use. It may have served to hold two kinds of paint or it may have been some sort of incense burner. The urn is decorated with two heads back to back. Each head may be said to fold around two corners of the urn. On the ends are seen the front view of mouth and nose and on the side the corresponding

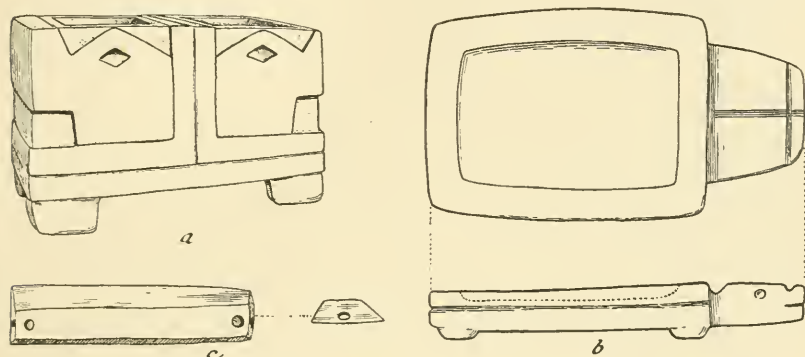


FIG. 12. — Objects of stone: *a*, larger table urn; *b*, flat mortar; *c*, stone bead.

side view showing the right-angled back of the mouth, the upturned nose, and the diamond-shaped eye. The lower jaws of the heads are lacking and no teeth are shown in the upper ones.

The second table urn (plate vi, *u*) was cut from a rectangular block of light volcanic stone of a dull yellow color. The measurements are as follows: height two and seven eighths inches; width, one and one half inches; length three and five eighths inches. The undercutting on this specimen is noteworthy, the legs are cut free from the block except for a thin horizontal shelf that binds them together near the bottom. The decoration is limited to a simple grooved moulding that runs around the edges of the upper and lower shelves. In the top of this little table are two square, sunken basins

similar to those in the first table urn. When found, the space between the upper and lower shelves was filled in with a fine brown substance in which was imbedded human teeth; some of this substance still remains in place. To an upper corner of this table urn adhered the jadeite ornament which will next be described.

This small jadeite ornament, reproduced in figure 13, *a*, is in-

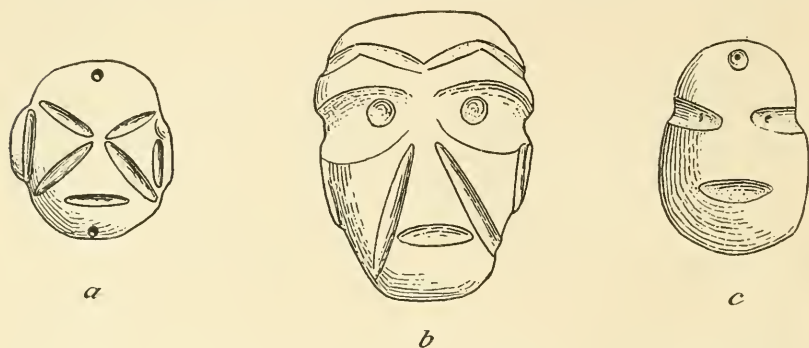


FIG. 13. — Amulets with grooves to indicate features: *a*, from Placeres del Oro; *b* and *c*, from Cerro Ceron, near Chilpanzingo (American Museum of Natural History).

interesting because it resembles in style the carvings on the ornamented celts and amulets of central Guerrero. The piece is a simple oval with a flat back and a slightly domed front which has been made into a crude face by seven straight grooves. Two vertical grooves at the side indicate the ears, four other grooves radiating from slightly above the center mark out the eyes, while a last horizontal groove shows the mouth. The stone is of a dark green color and without a flaw. There are perforations at top and bottom of the amulet. Two green stone pendants from Cerro Ceron, near Chilpanzingo, are reproduced in figure 13, *b* and *c*, for comparison.

Another specimen of considerable interest is a flat, shallow mortar, probably used for grinding paints and medicinal herbs. The dimensions are as follows: total length nine and one-half inches; width five and one-quarter inches; height one and one-half inches; depth of the basin about one-quarter inch. The material is a bluish fine-grained andesite. The body of the mortar is an oblong with somewhat rounded corners, supported on four short legs. At

one end is a projection probably intended for a handle. This projection roughly represents an animal head with a slightly turned-up nose, as may be seen from the drawing (fig. 13, *b*). The mortar as a whole, may indeed, represent a turtle. The turtle is frequently and excellently shown in the art of western Mexico, particularly in metal work.¹ The turned-up nose, however, suggests a connection with the profile heads that have just been described.

That the objects in the burial, in addition to the carved tablets, comprised a set of personal ornaments and toilet articles seems pretty clear. Beads of many kinds were found, some of which are shown in plate VI, *c* to *t*. One plain cylindrical bead of the usual bluish diorite measures five and five-eighths inches in length and one and five-eighths inches in diameter. The bore is five-eighths of an inch across. This bead probably served as a breast ornament.

Eight angular strips of shale perforated at each end for attachment were likewise discovered. These measure about three inches in length and half an inch in width. Rather obscure photographs of two of them are shown in plate VI, *k* and *l*, and a typical specimen is reproduced diagrammatically in figure 12, *c*. Close to the flat mortar, as the objects were placed in the grave, were found twelve bivalve shells about three inches in width and arranged in two rows.² These shells, which were in a crumbled state, contained about six hundred flat circular shell beads which are shown strung in plate VI, *f*. One of these large shells contained a number of very minute beads and some crumbling bones that seemed to be those of a child. In addition to the contents of these twelve shells there were discovered fourteen olivella beads with a perforation through the side (*g* and *j*), four tubular shell beads three inches in length (*c*, *e*, *s*, and *t*), one curved shell bead (*d*), thirty-one more or less rectangular shell strips, three inches in length, with a hole bored in each end (*h* and *i*), one oval-shaped amulet and twenty-six square shell buttons with a hidden eye or perforation on the under side. Of the last item six specimens are shown in plate VI, *m* to *r*, and a

¹ C. Lumholtz, *Unknown Mexico*, 2 vols., New York, 1902, II, p. 414.

² Some of these minor details are taken from a short account of the find printed in the *Mexican Herald*, of October 16, 1910.

diagrammatic drawing presented in figure 11, *e*. These buttons are believed to be a new type in the primitive handicraft of Mexico.

A large obsidian core from which knives were struck off was found at one side of the grave. Fragments of obsidian implements are said to be rather common on the ancient sites. Other pieces of unworked material consisted of two conch shells, one of which was nearly entire. They showed no signs of ornamentation or of use.

HISTORICAL REFERENCES

While very little is actually known concerning the pre-Spanish ethnography of central and northern Guerrero, the region was in all probability a debatable and ambiguous ground between the Zapotecan-Miztecan culture on the southeast, the Nahuatl on the east and northeast, and the Tarascan on the north and northwest. The historians usually refer to this large area as the province of Zacatollan, but even the indefatigable Bancroft threw up his hands in disgust when he tried to gather facts concerning it.

It is known that about 1497 the province of Zacatollan, named after the city of Zacatula at the mouth of the Balsas, was made tributary to Tezcuco through the reckless daring of Teuhchimátsin.¹ This region furnished much of the copper² and gold³ used in the arts by the people of the highlands and for some time had excited the cupidity of the conquering Mexicans. According to Orozco,⁴ Zacatollan comprised the territory between the course of the Río Balsas and the shores of the Pacific and in addition extended along the margin of the sea some distance toward the northwest. The Cuitlatecan language of the Nahuatl stock was spoken over a large part of this area, particularly in the southeast, and is in fact still spoken in Ajuchitlan and Atoyac.⁵ There are, however, names of a number of other languages which have entirely disappeared.⁶

¹ Fernando de Alva Ixtlilxochitl, *Obras históricas*, publicadas y anotadas por Alfredo Chavero, Mexico, 1892, II, pp. 279-281.

² H. H. Bancroft, *The Native Races*, 5 vols, San Francisco, 1883, II, p. 473.

³ Bernal Díaz del Castillo, *Histoire véridique de la conquête de la Nouvelle-Espagne*, Traduction par D. Jourdainet, Paris, 1877, p. 285.

⁴ M. Orozco y Berra, *Historia antigua y de la Conquista de México*, 4 vols., Mexico, 1880, II, p. 175.

⁵ Idem., II, p. 176.

⁶ Idem., II, p. 252.

Thus, it seems quite likely that the population was heterogeneous, and may have been made up of remnants of older civilizations crowded back into this mountainous and out-of-the-way corner of Mexico by the new nations that had invaded the plateau.

But the valley of the Rio del Oro and adjacent portions of the valley of the Balsas in all probability did not actually form part of this little known province of Zacatollan. There are many Tarascan place names in this region. For instance, Zirándaro¹ means in Tarascan, "the place of the books or manuscripts." Coyuca,² more properly Cuiyucan, means "the place of the eagles." This town is represented in the Codex Mendoza by an oddly shaped head wearing a golden ear pendant (fig. 14). Such human head glyphs often indicate a foreign tribe. Pungaravato³ means "the hill of the feathers," and the list might be continued.



FIG. 14. —
Place name
hieroglyph for
Coyuca.

The tireless Orozco, after considering at length the various extravagant claims for the extent of the Tarascan domain, admits⁴ that on the south it probably included some towns in the Mexican province of Zacatollan, the natural boundary of which was the Rio Balsas. Indeed, Zirándaro appears on all the lists of Tarascan towns given, and Coyuca receives prominent mention.

Fortunately we are able to fix the southern limits of Tarascan speaking peoples during the Spanish epoch beyond doubt. In the two volumes of the *Theatro Americana* of Joseph Antonio del Villa-Señor there is detailed information concerning the jurisdictions of the various divisions of the Catholic church throughout Mexico. This book bears the late date of 1746 but may well be based on church records of earlier date.

Approaching the region under discussion from the south we are told that the town of Ajuchitlan⁵—already noted as a place where

¹ A. Peñafiel, *Nomenclatura geografica de Mexico*, Mexico, 1897, p. 333.

² E. Ruiz, op. cit., p. 54, footnote, and A. Peñafiel, op. cit., p. 69.

³ E. Ruiz, op. cit., pp. 334 and 339, footnotes.

⁴ Op. cit., II, p. 211.

⁵ A. J. Villa-Señor, *Theatro Americano, descripcion general de los reynos y provincias de la Nueva-España y sus jurisdicciones*, 2 vols., Mexico, 1746, I, pp. 223-229.

the Cuitlatecan language survives—was the head of a jurisdiction operating under the Bishopric of Mexico City. While the northern limits of this jurisdiction are not precisely defined it is clearly stated that the town of Cuzamala belonged to the Bishopric of Michoacan and that the natives spoke Tarascan. Other towns of Tarascan Indians are named. It need hardly be pointed out that church administration and instruction would naturally divide on the frontiers of language.

The town of Zirándaro¹ at the mouth of the Rio del Oro, was the head of a jurisdiction operating under the Bishopric of Michoacan. It is described as a "republic of Indians with a governor, and in it there are counted ninety families of the Tarascan tongue." Four ranchos or haciendas conducted by Spaniards and half-breeds are mentioned as directly tributary. Other towns administered from Zirándaro, were Santiago and San Geronymo farther down stream, Guimeo, which seems to correspond with the modern town of San Agustín, together with Coyuca and Tlapehuala. Coyuca numbered ninety-five families of Indians and Tlapehuala sixty. These pueblos bounded the Cuitlatecan jurisdiction of Ajuchitlan which has already been discussed. Pungarabato, Huetamo, and other towns on the north side of the Balsas were likewise administered from purely Tarascan centers. The old state boundary of Michoacan probably marked pretty accurately the line of language contact. It is interesting to note that Zirándaro, although on the south side of the Balsas, is still within this state and that Coyuca was likewise included until 1849.

No historical evidence has been brought forth concerning the ancient sites in the valley of the Rio del Oro with the possible exception of the one at San Agustín. It seems pretty clear that these sites were deserted, perhaps centuries before the coming of the Spaniards.

Coyuca, indeed, is frequently mentioned in Tarascan tradition, but this town, which still survives, may date from a much later time than the ruins in its vicinity. In the centuries just before the coming of the Spaniards, Coyuca was apparently a city of great

¹ Villa-Señor, *op. cit.*, II, pp. 92-93.

ceremonial and political importance. It may have inherited much of this importance from an earlier center of power and culture. In the anonymous *Relacion* which gives our only extended information on the pre-Cortesian history of the Tarascans, the great chiefs are frequently named as "the lords of Mechuacan and of Coyucan and of Pazcuaro." But the most interesting reference to Coyuca is as follows:¹ "Let it be added that Tariacuri divided Mechuacan into three lordly domains. Hirépan was ruler in Cuyacan which was the capital because Curiacaberi existed there in that stone which was said to be Curiacaberi himself." Unfortunately little is known concerning the mythical history of Curiacaberi, the chief divinity of the Tarascans, or his representation in art. Brinton,² on slender evidence, calls him a god of light. To be able to connect this divinity with the sculptured slabs we have just described would be most exciting. But in all the range of Tarascan art nothing has yet been discovered that remotely resembles these curious sculptures. To identify out of hand the faces on these slabs with this great divinity, who is said to have dwelt within a few miles of the site where the slabs were discovered, would be an act of pure romanticism quite out of keeping with science of the twentieth century.

Many interesting but uncertain details regarding this region are to be gathered from the book of Señor Eduardo Ruiz entitled *Michoacan, paisajes, tradiciones y 'legendas*. Using as a basis the anonymous relation that has just been referred to, he set for himself the difficult task of "seeking out the intention, reconstructing the idiom and adjusting the narrative to exact requirements." He patched out the faulty narrative with fragmentary folk-tales still current in the back country. Partly upon the authority of a Señor D. Trinidad Bustos of Huetamo he relates³ that Hirépan, to whom Coyuca had been awarded when the Tarascan area was divided, set out from Uruapan to conquer the city of Tumbiscatio, whose ands

¹ *Relacion de las ceremonias y ritos, poblacion y gobierno de los Indios de la provincia de Mechuacan* etc., edited by F. Janer, Madrid, n.d., p. 292.

² D. G., Brinton, *American Hero Myths*, Philadelphia, 1882, p. 208.

³ Op. cit., pp. 328-332.

lay between the Balsas and the provinces of Coalcoman and Colim. Having succeeded in this he crossed the Balsas and near the present town of Cuahuayutla met the inhabitants of the ancient city whose ruins are now known as the Casas Viejas or Casas Grandes. Continuing towards Coyuca he crossed the Rio del Oro, in the stream bed of which his soldiers picked up nuggets of gold. He found the valley well populated and watched the sunset from a small temple in which was an ancient priest wearing a mask of stone. Hirépan finally arrived at Coyuca where he was appointed king. It is probable that Hirépan ruled Coyuca hardly more than a hundred years before the coming of Cortés and that this fantastic legend is merely a modern attempt to account for the ancient ruins.

It seems unnecessary to pursue this matter further. The perplexing and highly unsatisfactory historical material relating to the Tarascans, and their ethnography as well, has been fully treated by Dr Nicolas León.¹ Descriptions of antiquities also appear in *Unknown Mexico* by Carl Lumholtz and in the *Anales del Museo Michoacan*. It is to be hoped that a full account of the valuable researches of Bishop Plancarte will soon be published.

There are few references to the antiquities of Guerrero. Bancroft² refers to a statistical work by Señor Celso Muñoz. A brief account of Mr Niven's³ explorations for the American Museum of Natural History is the only other reference that has come to light.

But collections from Michoacan and from central Guerrero show few similarities to the material from Placeres del Oro, being in general much cruder. The likeness in carving between the jadeite armlet and the decorated celts and small stone figures from the ruins around Chilpanzinco has already been pointed out. At Cerro Ceron were found fragments of a carved shell arm-band comparable to the one already described. A good collection of potsherds from these three areas would quickly settle the question of likeness or unlikeness, but there is no such collection.

¹ *Los Tarascos* (appeared in parts in *Boletín del Museo Nacional*, segunda época, I, 1904, and in *Anales del Museo Nacional*, segunda época, I and III, 1904 and 1906).

² *Op. cit.*, IV, pp. 423-424.

³ W. Niven, Omitlan, a Prehistoric City in Mexico, in *Journal of the American Geographical Soc.*, XXIX, 1897, pp. 217-222.

ANALYSIS AND INTERPRETATION

Let us now attempt a more analytical study of the two remarkable tablets. Considering the design on slab A as a whole it is conceivable that it was intended to represent an entire figure. The four subordinate faces might, in the course of artistic elaboration, have replaced the original arms and legs of the principal personage.

Such replacement would be in accordance with the common process of substitution that prevails in all highly elaborated art whether barbaric or civilized. Indeed, the substitution of new and striking details for old and commonplace ones—even at the expense of the first meaning of the design—is one of the simplest and most natural ways by which imagination can reconstruct and revivify worn out subjects. The effort of creation is noticeably less in making a parody than an original work of art. For the parody preserves, in greater or lesser degree, the fundamental composition upon which much of the noteworthy individuality of the original depends. Especially in the art of drawing, details of a composition may be progressively replaced by other quite different details, realistic or geometric, until in the end only a trace of the original setting remains. The history of the design is then made clear only through a study of the homologous parts of a long series. While it is dangerous, in the absence of intermediate evidence, to state positively that the four supplementary heads on slab A have replaced the arms and legs of an earlier entire figure, still the possibility of such a change is made more striking by changes which clearly did take place and which will presently be described. But in slab B the design as a whole, is even farther removed from such a possible origin.

It is now necessary to lay the ground for further elucidation by a rapid summary of ancient artistic results in Mexico and Central America and the conditions which created them. The art was, as everyone knows, strongly religious and the religion was, at heart, a complicated animal worship. The serpent and the jaguar played the leading rôles but many other animals were cast for minor parts. These animals, conceived and represented as gods, passed through a line of change from the natural, through the grotesque, to an

approximation of the human form. Even when drawn with their natural bodies they commonly wore human ornaments such as nose- and ear-plugs. But while the outward characteristics of human forms were given in part to animals there was often a reciprocal debasement of the really human with the curious result that it is often difficult to tell whether a face was intended to represent reptile, bird, wild beast, or human being.

Much has been written concerning the undoubted importance of the serpent in the religion of this area. There is good reason to suspect that the serpent was even more potent in art than in religion. Many of the gods of the later Mexican pantheon were distinct enough in powers and attributes and seem to have successfully cast off some earlier animal form only to be endowed afresh with ophidian features. Decorative art, even when applied to the meanest object, was filled with the suggestion of the serpent. This dominating character of the serpent in Central American art was probably due to its peculiar form of body which was able to furnish a richer theme, and one with more striking possibilities of artistic development, than could that of any other animal in competition.

A third point deserves a word or two; namely, the question of the relations existing between geometric and realistic art in this region. It is a well known fact that geometric art reaches a high plane among many people of low culture. In most cases it has doubtless been developed by the limitations and suggestions of the common technical processes of basketry, weaving, etc. The universality of geometric art is easily explained on esthetic grounds, for such art constitutes the simplest and most unmistakable expressions of order and harmony, without which no successful appeal can be made to the unintelligent sense of the beautiful. Many attempts have been made to prove that geometric motives arise from the decay of earlier realistic ones. The rich geometric art of Mexico and Central America has been attributed to the dissolution of the serpent in design. Such can hardly be the case. Geometric art, sure of its absolute power to please, is a very militant principle rather than a product of decay. It attracts the realistic or didactic

forms and throws them into "conventionalized" forms which appeal, at once, to the understanding and to the esthetic sense.

With this preamble let us proceed to the examination of the front view faces on the tablets. Although large circular eyes—an evident geometric modification—are found on many sculptured faces, in particular on the face of the Aztec rain-god, Tlaloc, yet plainly marked eyebrows in conjunction with them occur rarely except on representations of the monkey. Figure 15, *a*, presents in a more or less diagrammatic manner, the central portion of a typical monkey face on a figurine found in the Valley of Mexico. Note the arched eyebrows, the eyes of concentric rings, and the flaring nostrils with the horizontal nose-plug. Ear-plugs were also shown on the original but have been omitted in the drawing.

Turning one's attention to the central portion of the face on slab B (fig. 15, *b*) it is evident that the above described assemblage of features has been modified as follows. Two serpent bodies have been interpolated between the eyes and the eyebrows. In the endeavor to adjust these intrusive bodies comfortably and characteristically to the limited space, the lines of the eyebrows have been considerably altered. Quite apart from this, the nose plug has divided into an upper and a lower strip and the upper strip has "captured" and made tributary the outer ring of the eye. The nostrils are represented by two short spirals but the rest of the nose is only vaguely suggested by a number of related angles and curves.

The artificiality of the face that resulted from these changes is quite obvious. Judged simply as a design it is an excellent example of an unstable composition with extravagant individuality. In the next face to be considered we will behold the successful attempt to reduce this complex to lower terms.

The central portion of the face on slab A (fig. 15, *c*) shows that each intrusive serpent has slipped down from its former anomalous position and that the central part of its body has amalgamated with the outer ring of the eye. At the same time the serpent's head and the adjacent part of its body have absorbed the upper strand of the more or less dissociated nose-plug, while the tail with one sweeping curve has outlined the side and base of the nose. The

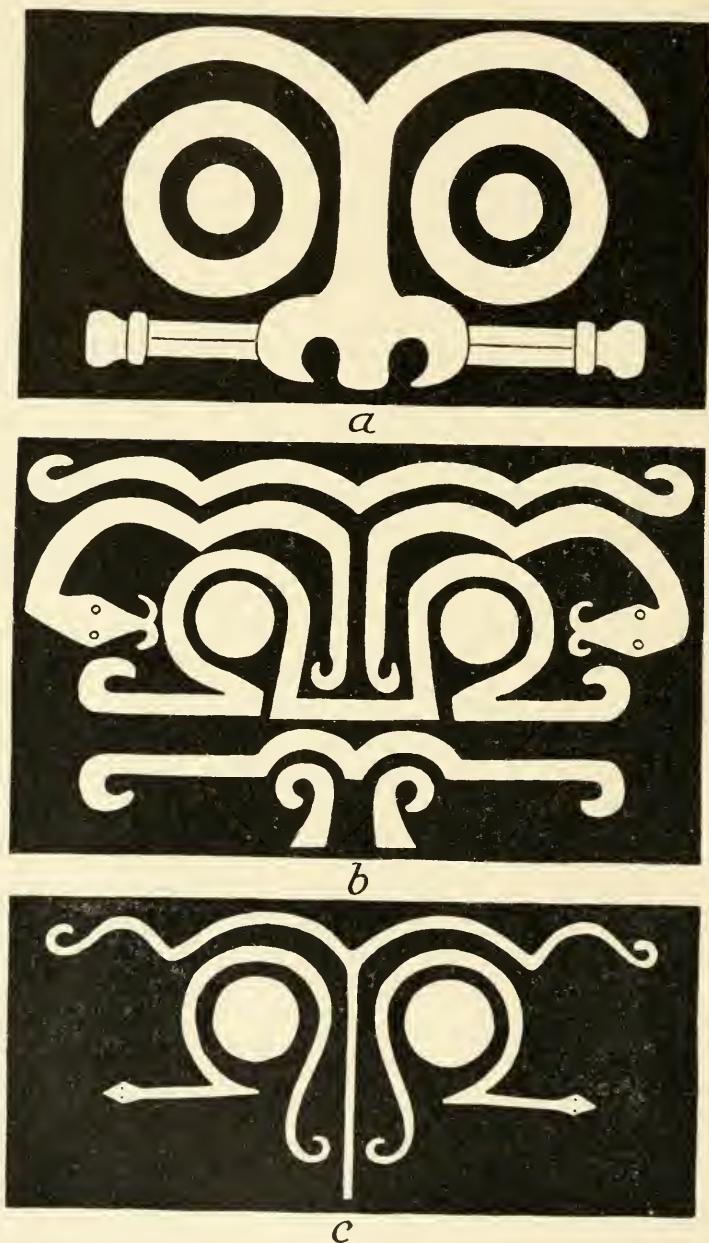


FIG. 15.— The development of the front-view faces: *a*, central portion of a monkey face on figurine from Valley of Mexico; *b*, same features on slab B with intrusive serpents; *c*, same features on slab A, showing the final adjustment of the intrusive serpents.

lower strip of the old nose-plug has either disappeared altogether or else has joined with the upper lip and is to be identified with the inconspicuous ribbon that lies along the line of contact with the profile heads (see figure 10). It has already been pointed out that the circular ear plugs of this face have slipped quite out of the proper panel and have been incorporated in the upturned noses of the profile heads beneath. The vertical line that passes along the ridge of the nose from the eyebrow to the upper lip, and perhaps the eyebrow as well, may be ascribed to the survival of the background design plotted in the more complex face between the serpent bodies and the free curve of the eyebrow. It is a well known fact that under certain conditions the usually negative background may flash positive and so greatly modify a design.

Of course the sequence of design just given does not prove that the heads were intended to represent monkeys but it establishes the possibility. The most important single feature is the eyebrow, which would in the case of the monkey, be the very prominent supraorbital ridge. The careful line of demarcation of the hair across the forehead is frequent in ancient representations of the bonneted or Capuchin monkeys, and, in fact, follows nature pretty closely. The mouth does not at first appear to be simian. This is because of the contracted lips. These monkeys have well developed canine teeth, with four small teeth between, exactly as is shown on slab A. The lines extending outwards and downwards from the sides and bottom of the mouth may represent the hair behind the cheeks and on the throat. Unnecessary as they may seem, lines around the mouth to represent hair occur frequently in drawings and on figurines that represent monkeys. The argument that the grotesque faces are monkey faces is strengthened by the fact that undeniable monkeys are shown on the carved arm-band from the same burial.

It is possible that the figures were intended to represent some monkey god or totemic spirit and that the representation was artist cally infected by the serpent. As is well known, the monkey is not found on the highlands of Mexico although his name, *ozomatli*, was given to the eleventh day of the twenty-day calendar month of

the Aztecs. However, monkey faces and figures often occur in the codices, in pottery stamps and figurines, and in gold ornaments.

If we judge the grotesque faces simply by the prominent canine teeth we may conclude that the jaguar or coyote was intended. The bristles about the mouth would strengthen this theory. Both animals are common enough in art all over Mexico and Central America.

There is also a strong possibility that the faces were those of Tlaloc, the Aztec rain-god. Such faces usually show circular eyes and several long teeth in the upper jaw. Speaking of Tlaloc, Dr Seler says,¹ "The god . . . is also everywhere represented in a somewhat similar and very remarkable manner. His face, as is very well shown on a stone effigy in the Uhde collection, which is contained in the Royal Ethnological Museum, Berlin, is properly speaking entirely formed of the coils of two snakes, which being entwined spirally develop a kind of nose in the middle of the face, then with a circular convolution encompass the eye on both sides, while their heads at last meet together with the snouts so as to represent the upper lip of the god and his long teeth projecting downward." It seems likely that this elaborate face, which Dr Seler considers the point of departure for the simple faces of the god, was merely a richly elaborated specimen, itself based on the lower, demotic forms. The head he described resembles in type and tendency the horrible figure of Teoyamiqui with her twining serpents. Many such examples of reptilian enrichment occur in Mayan and Nahuatl art, and are not absent even among the Tarascans.²

The Tlaloc face most nearly resembling those on the slabs is one on a large terra cotta vase in the Museo Nacional (fig. 16, *a*) after Brasseur de Bourbourg. The nose-plug is clearly represented and the face is more or less humanized. A simpler Tlaloc face is shown in figure 16, *b*, and occurs on a stone sculpture from Huachinautla, in the western part of the state of Puebla, in the collection of Mr Juan E. Reyna.

It has been stated that the grotesque face at the top of slabs

¹ E. Seler, *Codex Vaticanus No. 3773*, Berlin and London, 1902-1903, p. 107.

² C. Lumholtz, *op. cit.*, II, p. 400.

A and B is seen rising out of the amalgamated jaws of two profile heads that look upwards. These heads (figure 17, *a*), if not considered entirely distinct, may be regarded, first, as representing a sort of

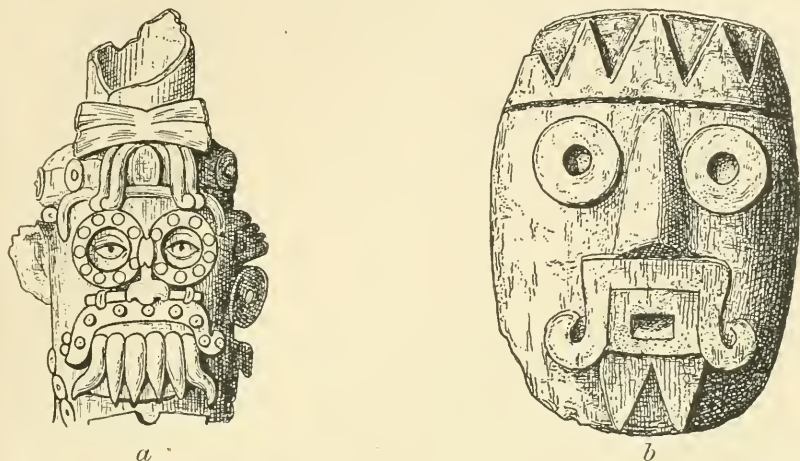


FIG. 16. — Face of the Aztec rain god Tlaloc: *a*, on a vase in the Museo Nacional, Mexico City; *b*, stone sculpture in private collection of Mr Juan E. Reyna.

ornamental collar around the neck of the upper face, second, as being highly modified arms of an earlier entire figure, third, as forming a vessel or container from which the grotesque face has emerged and in which the rest of the body lies hidden. Comparative art would hardly support the first explanation, obvious as it may appear;

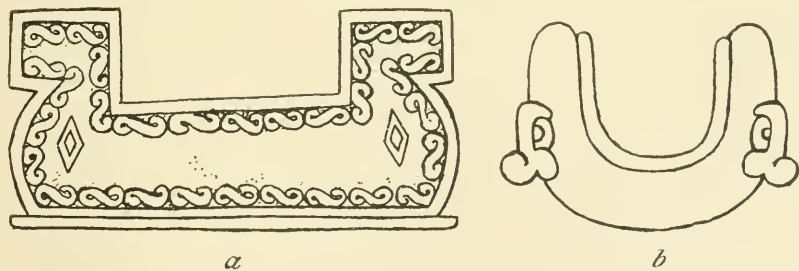


FIG. 17. — Relation of the fused-together heads to the earth-bowl: *a*, detail of slab B; *b*, the earth-bowl, after Gordon.

the second has already been commented upon; the third will now be considered.

This hollow, basin-like device made by the joining of two incom-

plete heads strongly resembles certain elaborated drawings of the so-called earth-bowl, frequently pictured in Nahuatl codices (figure 17, *b*). Arguing from complex towards simpler forms, Dr Gordon¹ refers the origin of this symbolic figure to the modified serpent's head, explaining that the serpent passed by degenerate conventionalization into "abstract forms representing definite ideas, in no way associated in our minds with the serpent." In the case of the earth-bowl the serpent element must surely be a later religious or artistic addition. The hollow land that holds lakes or seas, and the grave that encloses the dead were each directly and quite naturally represented by the graphic simile of a bowl. The sides of this bowl were fair field for any embellishment the artist chose to put there although it is possible that the presence of the serpent might have served some secondary religious purpose.

When the profile heads are arranged in a series (figure 18) some interesting changes are to be noted. None of these heads contains all the features. The most complete profile head is *a* which makes half a front view face on slab B. The more simplified face *b* is also only a portion of a face that is folded around two corners; note the absence of the lower jaw. The incomplete face shown in *c* is one of the fused-together heads; note its similarity to *a* in general outlines. The figure 8 decoration around the border, as well as in the mouth of the next head, has been explained as a Nahuatl astronomical symbol. Since native explanations are lacking such identification is pure guess work. Profile heads *d*, *e*, and *f* all show a peculiar device attached to the eye. Somewhat similar eye ornaments are found on carvings from the Calchaqui of Argentina and the mound-builders of the United States but, of course, no significance is to be given to this fact. The last head from the shell arm-band is the most incomplete of all. Only the eye with its appendage can be definitely made out. It seems probable, although by no means certain, that these profile heads were intended to represent the ever recurring serpent.

The double-headed serpent, commonly represented in Central

¹G. B. Gordon, The serpent motive in the ancient art of Central America and Mexico, in *Trans. of the Dept. of Archaeology*, University of Pennsylvania, 1, pt. 3, 1905, p. 10.

America and Mexico, may have been intended by the design on each side of the plain panel at the base of slab B. The vertical strips of geometric ornament may form the body, and half of each lower and upper front view face may form the heads. The decoration of one

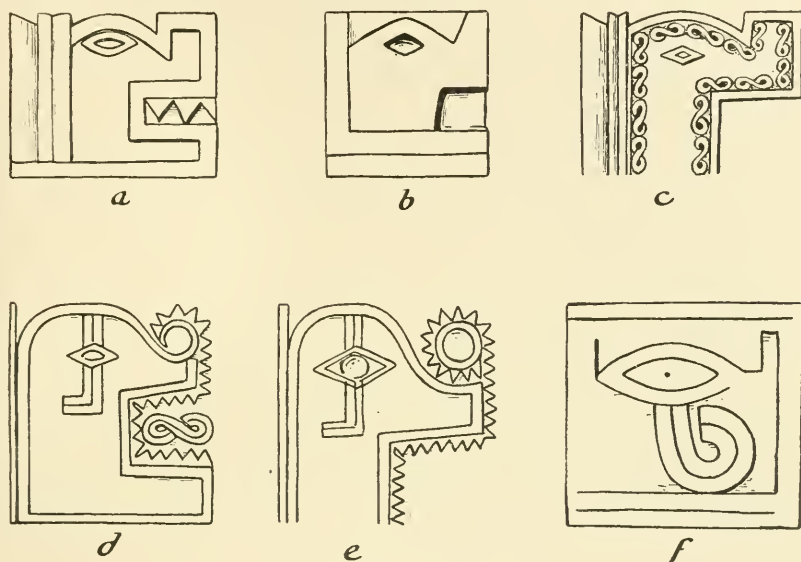


FIG. 18. — Series of profile faces: *a*, slab B, lower part; *b*, larger table urn; *c*, slab B upper part; *d*, slab A, lower part; *e*, slab A, upper part; *f*, shell bracelet.

body would then be the guilloche which Dr Gordon derives from the serpent on no stronger grounds than that snakes in design were sometimes thrown into this primitive mode of order. The design on the other body would have geometric figures common from Peru to the Pueblos of the Southwest.

To sum up: The multiplicity of possible connections between these sculptures and those of Central America and the Valley of Mexico seems to indicate pretty clearly that the ancient culture of Placeres del Oro was more closely related to the Nahua than to the Tarascans. But there is such a strong note of individuality that we are almost justified in naming these artifacts as masterpieces of a new culture area. Certainly, these interesting specimens should stimulate further exploration in this little known region.

BULU KNOWLEDGE OF THE GORILLA AND CHIMPANZEE

BY ALBERT ERNEST JENKS

THE following facts are from data gathered at my request by Mr Francis B. Guthrie, recently of Kolodorf, Kamerun province, German West Africa. Mr Guthrie says it is almost impossible for the white man in Kamerun, though in the center of the gorilla's geographic range, to have intimate knowledge of that animal. He has known of only one white man who has killed a gorilla there in five years.

The facts here presented were obtained from members of the Bulu tribe whom Mr Guthrie has known intimately for some years, and with whose language he is familiar. They were verified by other natives than the original informants; but Mr Guthrie calls attention to the Bulu's credulity and his decided tendency to exaggerate.

THE GORILLA

The gorillas of Kamerun live in small companies, scarcely to be called families, except in the younger days of the band when only two, three, or four individuals are found together. A company seldom comprises more than twelve members, and is said never to exceed fifteen or sixteen. The smaller companies consist of one male with his one, two, or three wives, and some small children. A company of six or seven members would probably have two adult males. As the younger members grow up they take, or rather keep, their places in the company. When the old male becomes cross, or possibly, it may be, too infirm to travel with the company, he goes off by himself and spends the rest of his life without companionship. As to whether this isolation is from individual choice, or whether the females refuse to have more to do with the old male, or whether the young males band together and force his retirement, the natives do not agree. "But," says Mr Guthrie, "we know that

isolation of the old males prevails among the drills, chimpanzees, monkeys, wild hogs, and elephants in the African jungles." The natives have absolutely no knowledge of the genesis of new families or companies.

The female bears only one child at a birth, and apparently prepares no special bed in anticipation. Until the child is strong enough to travel the mother carries it with her much of the time, clasping her arm around it. She picks the child up by one arm, often cradling it in her two arms as the human mother does her child. The natives note in this conduct one of the gorilla's greatest likenesses to man.

The gorilla seldom, if ever, sleeps two successive nights in the same place. In the virgin forest he commonly makes a "bed" on the ground. This consists of a few poles, usually dead wood laid side by side. Sometimes the bed is made in a low branch of a leafy tree. Apparently each gorilla sleeps by himself, and the beds are made some little distance apart. When, as is very common, the night is spent in old gardens, the tall reeds are broken down and the gorilla sleeps on a bed of leaves from two to four feet from the ground. The gorilla goes to bed late and rises early.

The foraging is also done independently as a rule, although it is frequently claimed and more or less generally believed by the Bulu that the "old man" sometimes has his food brought to him, as, for instance, when the gorillas are eating the fruit of a tall tree. They find most of their food very early in the morning or late in the day. They also commonly feed on moonlight nights. No record is found that they store food. Their food consists of many kinds of forest fruits, from shrubs and trees, and also of such bananas, plantains and sugar cane as they can secure from the more or less deserted "old" gardens. These gardens are their common haunts. They stay for days, weeks, or even months in one section, and then suddenly change locality. They usually return at the next season; and thus are seasonal migrants.

The gorilla usually walks upright as he travels and feeds on the ground, and he spends very little time in the trees—probably none, except for food or an occasional sleep. Gorillas are commonly

very timid and flee at man's approach, but the Bulu natives fear them greatly, and with some reason, for when a large male attacks a man, that man must be strong and crafty to come out alive. However, only when a gorilla's family is in danger from man, or when a male is wounded or savagely attacked, will the gorilla attack a native. At such times he shows much craftiness as well as great strength. Mr Guthrie relates:

"In one instance a band of gorillas was attacked by two Bulu men. The old gorilla of the band first got his family out of danger, and then returned to the encounter. He made a considerable detour behind the hunters in the endeavor to ambush them. Fortunately they heard him breaking through the bushes and thus avoided a most unpleasant meeting."

Again Mr Guthrie says:

"One native who is well known to me, shot a gorilla and was attacked immediately by another, which, fortunately for him, was a very old female that had lost most of her teeth. The man was therefore able to kill her with his knife, but not until she had mauled and torn him terribly. There is little doubt that had the attacking gorilla been a large able male, the man would have been killed."

The Bulu natives commonly believe that a wounded gorilla is rescued and carried away by its companions. And Mr Guthrie presents one "authentic instance" as grounds for such belief. A Bulu once shot a gorilla, and, thinking it dead, cut off a foot to take back to his village. On returning the next morning with companions, the natives discovered that the body was gone, but they followed a trail leading away for fully a mile, where they found the gorilla dead. The trail was stained with blood, and the marks along the trail plainly showed that the gorilla had been carried.

The native rates the gorilla as superior to most of the other forest animals of Kamerun, though he wins this distinction more because of his prowess as a fighter than because of his exceptional sagacity. However, he has a reputation for his usual ability to avoid traps, and his ability to free himself even from woven nets, when, very infrequently, he is caught in them. The chimpanzee is recognized as intellectually much superior to the gorilla.

FOLK TALES OF THE GORILLA

The following folk-tales show how closely akin the Bulu believes himself and the gorilla, though the relationship is not considered more close than it is common for hunter folk to consider exists between themselves and dozens of other species of animals.

The Gorilla and the Man

"And it happened thus:—God bore children, a gorilla and a man. The man built himself a town and had much food, always; but the gorilla went to the forest and lived on 'bison' [a small red fruit]. After a time the bison was finished and the gorilla found nothing to eat. He said, 'I will go to my brother; he will give me food.' His wives and children said to him, 'Will you leave us?'

"He said, 'Come along, all of you.'

"So they went and came to the path [man's path], and there they found sugar cane growing in the gardens. So the children and the wives stopped there to eat the cane. The husband went on unmindful. He came to the town and sat down in the "palaver house."

"Then he said to the man, 'Oh, my brother, I was about to perish of hunger, therefore I came to you. You will give me food?'

"So the man told his children to go and break [gather] some sugar cane. The children went, but found that the gorillas were eating the cane. They therefore returned to the village and told the man that gorillas were eating and breaking down the cane. The man told them to call others, and go drive the gorillas away. So they went.

"The gorilla [in the palaver house] said to himself. 'Why, they have gone to kill mine.' So he told the man he must go for a walk, and making a detour he arrived at the garden. The man-children arrived, and the old gorilla shouted and scolded and drove them all away, and they ran back to the village. The gorilla went back and resumed his place in the palaver house. The children came running up, and the old man called out, 'What's all this?' They answered, 'A terrible old gorilla came out madly at us and drove us away; yes, and his face looked exactly like the face of that one over there in the corner!' The man said, 'Call a great many people and go back and drive them out.'

"They did so. The gorilla made another excuse and making a detour reached the garden. The man-children arrived. Then the old gorilla shouted at them, caught and bit some of them, and drove them all away. Then he went back to his seat in the palaver house.

"Soon the crowd of women and children came in [to the palaver house], and the man said, 'What happened?'

"'We went out there again,' they said, 'but one old gorilla attacked us and caught and bit some of us and drove us all away; and that old gorilla had a face just like the face of your guest over in the corner!'

"Then he [the man] took his gun and went out to the garden. The old gorilla went out by the same detour as before and came again to the garden. The man came. He saw the gorilla. He said, 'I can not endure that you harm my children.' So he shot the gorilla, and the gorilla died."

The Child and the Gorilla

"It happened thus:—A woman bore a child. She had no one with whom to leave the child, so she went to the gardens taking the child with her. When the child fell asleep she laid it on the ground and went on hoeing weeds. After a time a gorilla came along and picked up the child.

"The woman turned and seeing him, inquired, 'What are you doing with my child?'

"The gorilla replied, 'Do not fear; the thing that will kill the child will not come from the forest but from the town.'

"She asked, 'Why?'

"He replied, 'Because of you and me. I will not do it harm.'

"So the woman continued to hoe the garden, but she looked often at the child. When she had finished hoeing, she said, 'Now I must go to town.'

"The gorilla replied, 'Come and take your child.' And he went into the forest.

"The woman went to town. And this thing happened many times.

"Finally the woman told her husband. He said, 'And will the gorilla take the child of man?'

"So he asked the woman where the gorilla stayed, and she replied that he stayed beside the large stump of a tree.

"In the morning the husband took a spear and placed himself near the large stump. The woman went to hoe weeds. The gorilla again came from the forest, took up the child, and went to his usual place by the stump. And he [the man] threw his spear and the spear hit the child and the child died.

"Then the gorilla went to the forest, but first stopped in the garden and said to the woman, 'I told you that the thing which would kill the child would come from the town; I am going now.'

"Thus did the gorilla do."

THE CHIMPANZEE

The Bulu tribe gives the chimpanzee credit for being the wisest of all animals. Many and strange are the Bulu stories of the cunning of this "man-like creature."

The chimpanzee of Kamerun lives in companies or bands, as does the gorilla, and, like the gorilla, he spends much of his time on the ground; but, unlike the gorilla, he spends his nights in the trees of his forest habitat. Just as the day is closing each chimpanzee makes for himself a leafy bed or nest, not unlike the large nest of a squirrel as seen in the early autumn on the leafy branches of our forest trees. At the first streak of a new day the nest is left, not to be occupied again, it is believed. The old males eventually become solitary, though the young on maturing are believed to remain in the kinship group.

The female gives birth to only one offspring at a time, and the child is picked up and carried cradled in its mother's arms against her body "just as we [the Bulu people] handle our babies." The chimpanzee child also cries and acts altogether like a spoiled human child when it can not have its own way. "These facts do more than all else to convince the Bulu that the chimpanzee is nearly half human. In fact some say that he seems to them more man than animal," says Mr Guthrie.

The immense forests furnish an abundance of varied food, so the chimpanzee usually experiences little trouble in satisfying its hunger. Sometimes he visits man's gardens for a change of diet, though less frequently than does the gorilla. Then he commonly seeks sugar cane which he eats with evident relish, and he also breaks it down with prodigal abandon. He sometimes takes a few bananas, and, less frequently, he takes plantain.

"Frequently he attempts to profit by the example of the garden's rightful owner," the Bulu says. At such times he breaks off many stalks of the cane, and then tears from its place of growth a woody vine and with it attempts to bind up the bundle of cane. "Commonly the twist he gives [binding the vine] fails to make a proper knot, or else he makes the mistake of tying the bundle of loose stalks up with a stalk still standing or with a sapling, and then it

can not be carried away. So he finally leaves with only one or two stalks which he chews and sucks as he leaves the garden."

The chimpanzee frequently gathers dead sticks and lays them together as though he would make a camp fire. As the natives say, "He makes up a camp fire, all except the fire." These piles of sticks are frequently seen in the forest.

These apes seem to have a real pleasure in color because "the chimpanzee sometimes takes the bright red or purple stem of a vine and wraps it about his wrist, and wears it like a bracelet."

If wounded while on the ground, a chimpanzee will often try to escape on the ground; but if wounded in a tree, he tries to escape through the branches of the trees. As he flees, if on the ground, "he gathers leaves or grass and plugs up any wounds he can get at. This is apparently to stop the flow of blood. Whether he selects any special kind of plant for this use, I have been unable to learn," says Mr Guthrie.

At play the chimpanzee is very imitative in a wild state, as well as in captivity. The *so* (*Cephalopus castaneus*), a small red antelope, has the habit of sleeping very soundly in the daytime, and one sometimes comes right up to it, in its sleep, before it dashes off. The belief is common among the Bulu that the chimpanzees catch these sleeping small antelopes and carry them up into the trees to play with. Mr Guthrie says, "One man only have I found willing to say he had seen such a case, and in that instance he said the *so* was shot while in the possession of a chimpanzee."

By day and night the chimpanzee seems always to have something to say, and one even when alone frequently makes noise enough for half a dozen animals.

"Sometimes when hunted the chimpanzee exhibits strange, almost human, emotions. When, for instance, he is found in a tree which by reason of its isolated position offers no chance of getting away except by coming down where the hunter is, the animal almost wrings his hands at the hunter and waves his arms about in an apparent appeal to the hunter's fraternity or humanity, not to shoot him. Sometimes this attitude is very pathetic, and I have heard black men say they doubt whether they could shoot a

chimpanzee because the animal appears so very human. Some, in fact, do refuse to eat the flesh of the chimpanzee because of this same reason. This means much more than those unacquainted with the Bulu people can readily realize, because the Bulu eats all flesh obtainable, from caterpillars to elephant hide.

The Bulu has many folk tales of the chimpanzee as well as of all his animal acquaintances. One version of a creation tale is here presented. Its variants are wide spread among other tribes of the Bantu people. The story is of the five most intelligent animals the Bulu knows, including, of course, the chimpanzee.

The Story of Creation

"God bore children named as follows: gorilla, chimpanzee, elephant, dwarf, and man. Then he decided to send them out, each by himself, to settle where they chose. They were given fire, seed, tools, etc. So they went out.

"The gorilla went first, and as he passed along he saw some 'bison,' so he turned aside to eat. When he returned the fire he had put down was dead, so he went back into the 'bush.'

"Then the chimpanzee started out. After going a little way he also became hungry and seeing fruit in a tall tree climbed up after it, first leaving his fire carefully at the tree's base. After eating his fill, he returned only to find the fire quite dead. So he too returned to life in the forest.

"The elephant went next, and like the others turned aside to satisfy his appetite, and his fire died out.

"Following him went the dwarf, who went out much farther and finally cleared away some of the underbrush and planted his seed and also built himself a small hut. He did not cut down the large trees, but he kept his fire going and he learned the ways of the forest.

"Then at last man started out and traveled very far indeed. Finally, choosing a location very carefully, he built himself a large good house, cleared a place for a large garden, even cutting down the tall trees. Then he burned the space and planted the garden; after long waiting the harvest came.

"After a time, God started out to see how his children were getting on. Thus he found that the gorilla, chimpanzee, and elephant were living in the forest from the fruit of the forest, even as they had chosen. 'So,' said God, 'you can never again bear [stand before] man, but must ever flee from him.'

"Then God went on and found the dwarf under the trees in the forest. 'So,' said God, 'you will always live thus, in the forest, but no place will be your fixed abode.'

"Then God came to man and found him living in a good house and in possession of and enjoying the fruits of his large gardens. So he told man that his estate and possession would also remain as it was, unchanged."

UNIVERSITY OF MINNESOTA,
MINNEAPOLIS, MINN.

A PETROGLYPH FROM EASTERN MASSACHUSETTS

BY HARRIS HAWTHORNE WILDER

MASSACHUSETTS petroglyphs seem to be of rare occurrence. In Mallory's work on pictographs (*Ann. Rep. Bureau Am. Eth.*, vol. x, 1893) but three are mentioned, one being, of course, the Dighton rock. The other two, given in Rafn's *Antiquités Américaines*, are in Rutland, Worcester county, and in Swansea, Bristol county, the latter about ten miles from the rock of Dighton. It thus seems of value to describe a stone, covered with inscriptions, recently obtained by the author, and now in his possession.

This stone is a small, oblong boulder of trap, its longest dimension being about ten inches, and its weight slightly under thirty pounds. Its surface has weathered to a rusty red color. Its location, when first found, was in West Wrentham, in the edge of Norfolk county, at a rough and picturesque spot known as "Joe's Rock," popularly associated with stories of the Indians, and still remembered as the home of the last local native, called "Joe." The stone was found about sixty years ago by a Mr Simeon Stedman, who noticed the markings on its surface, and who was sufficiently interested in it to carry it to his house in Cumberland, R. I., about two miles from Joe's Rock. There it remained for thirty years or so, when it was used to mend a back door-step, and was unfortunately set in such a way that one surface was constantly exposed to wear. It stayed in this position for thirty years more, during which time the exposed surface was worn nearly smooth, although it still shows a long zigzag line and two round pits, presumably the deeper parts of an inscription now lost. The remainder of the stone was well protected, however, in part by the earth in which it was imbedded, and in part by its position, and when removed from the place, and washed, presented the appearance shown in the photographs here given (pl. VII).

Counting the worn surface the inscription runs around the entire stone, leaving uninscribed only the two rougher ends, which are opposite each other, and were obviously the sides which received the least amount of polish from the glacial action. In order to transcribe this inscription to a flat surface, at the same time keeping the proportions as perfect as possible, several rubbings were made on thin paper, and the grooves and other depressions then carefully traced and enforced. From these, pieced together, a tracing was made in the form of a continuous inscription, as shown in figure 19.

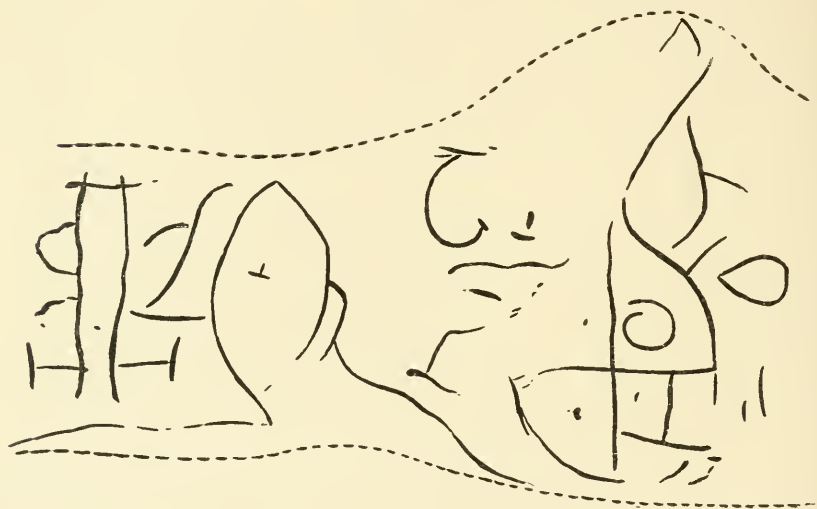


FIG. 19.—Tracing of figures inscribed on the boulder shown in plate VII extended at full length. (By Professor W. H. Holmes.)

This work was kindly undertaken by Professor William H. Holmes of the United States National Museum. This inscription disappoints one a little at first by the absence of the more usual human and animal figures, but in this and other respects bears a striking general resemblance to certain well-known petroglyphs, especially the one on Bald Friar Rock, Maryland (Mallery, *op. cit.*, p. 84, fig. 45). It is also not unlike certain parts of the Dighton inscription. The use of small boulders, instead of cliff faces and other large rocks, is not unknown, and several instances of it are cited by Mallery, some of them within the former bounds of Algonkin people (*Op. cit.*,

p. 105, fig. 72, at McCall's Ferry, Penn.). It happens, also, that Mallory has seen and pointed out a general similarity between these very cases cited, including the Dighton rock, in respect to the form of inscription, and to the same class the present case may be added. The fact that its place of discovery was but thirty miles from the Dighton rock, and at about the same distance from Swansea, is of interest in this connection.

In our present state of knowledge concerning petroglyphs in general any suggestion of the purpose for which this inscription was made would be purely speculative, yet its small size, and the ease with which it could be transported, even to a considerable distance, would suggest for it some ritualistic use, even as the same peculiarity would render improbable its use as a tribal boundary, or as a memorial of a great local event. The large amount of labor involved in executing the carving by the aid of primitive tools would practically exclude the purpose of a simple message left by one party for one that was to follow. Finally the inevitable question of authenticity presents itself, in considering which the circumstances attending the find, and the author's personal knowledge of the people involved, excludes every possibility of conscious fraud within the present generation. Neither is fraud to be expected sixty years ago, in a community of New England farmers, whose interest in such things amounted at best to a slight curiosity. The intrinsic evidence shown by the stone itself must be left to the experts, and can, perhaps, be satisfactorily studied from the illustrations accompanying this paper.

SMITH COLLEGE,
NORTHAMPTON, MASS.

MENOMINEE TALES¹

By TRUMAN MICHELSON

THE following three tales were collected during a brief stay with the Menominee last autumn. They were obtained only incidentally to the determination of the relations of the divergent types of Algonquian languages. I have to thank most heartily Judge Peroute, a priest of the Grand Medicine Society, and John Satterlee, a half-breed who was the official interpreter at Keshena, for their services as informant and interpreter respectively.

THE STORY OF THE CULTURE-HERO²

God³ came with the great servants in heaven.⁴ They consulted together, and agreed to put an island down here. "Let it be done through you" the servants said. He created this earth. "Now I have made it in accordance with your consent. What will you now do?" They consulted again. They said to each other: "Who is going to walk on the earth?" When he spoke to the servants he said: "I am going to make two women; one will be the mother of the other." Then God placed two women on the earth. He breathed into them, and they became alive. Then they two began to know each other. The mother knew right away that she was the mother of the other and told her so. "Now we are both put here by the great Creator" the mother said to her daughter. This was early in spring. "We must have a shelter." When they were in a shelter it was summer.

They both got hungry. "We must go over there for something

¹Published by permission of the Bureau of American Ethnology.

²This is the most sacred myth of the Menominee; and it is the one on which the Mitä'wit traditionally rests. It was too long for me to take down at one sitting and so it will be found that certain parts overlap each other slightly. On the Mitä'wit see Hoffman's essay on the Menominee, *14th Ann. Rep. Bur. Am. Eth.*, p. 66 ff.

³*Malcihawātāk*.

⁴The word used here (*Manasanōhawātōkāk*, 'Servants of the Greater Creator') is not menial in sense. The greatest of these "servants" is Big-Eagle.

which I know is provided for us." These were Indian potatoes. They dug potatoes all day long.

It came to pass in the middle of summer that God spoke to his servants saying "What shall we do? We have placed two women down there." After they had consulted the Creator said: "We will cause it to pass that the daughter shall conceive. She must have offspring." "How will that be done?" the servants said. The Creator said: "We will throw life into her womb from here so there shall be offspring." Then the Creator said to the servants: "I shall send some one from here into her body who shall be born by her. He shall watch over this island, this earth, and be guardian of it; he shall walk around it; he shall make laws for the two women."

While digging potatoes she perceived that she was pregnant; she heard a roaring noise attended with wind. It encircled both women. It flew around the daughter's dress so that it flew up like an umbrella. The Creator put into her a living being. The daughter then perceived that something was the matter with her womb. She knew a human being was in her. "What is it mother? I believe I feel as if somebody, some life, were in me." A short time afterwards at their own lodge, at night, a little baby boy was born to the daughter. The old woman attended as nurse. She grasped the little boy and said as she grasped him: "This is my little grandchild who has been given to me. This is little Mänäpusō'sa." The old lady was pleased when she grasped the little boy, and named him right away.¹ The old lady put him away. The mother felt still another being in her person. The second birth was a buffalo. The old woman drew it out. Then came a moose, an elk, and all other animals. The old woman took them one by one outside; they walked away. All the animals that are now known were born. Then the daughter died. Then the old woman said: "It has been well done, it is good what has been given us by the Creator." The grandmother then cried. Then she said: "The great Creator has

¹At this point a handful of tobacco was thrown on the fire. This is customary when mentioning the culture-hero's name or telling his adventures. *Mänäpusō'sa* is a diminutive of *Mänäpus*.

given us enough anyhow. I shall be content with little Mänäpusō'sa."

The grandmother perceived that two or three days after the mother died little Mänäpusō'sa got up, walked, and talked. Then little Mänäpusō'sa said to his grandmother: "Do not be sad because my mother has died and left us. I will afterwards look for her."

In a few days he grew to be quite a boy; in a month's time he was a big young man. He began to wander off; he had already made a bow and arrow. He would start in the morning; he would walk all over the earth and come back at night. He did so a few times. He said to his grandmother: "We should not be lonely. There are plenty of my little brothers existing in the wilderness. I found them. We should be happy." He meant the animals. He had told them to remain where they were. He had told his little brothers what they should eat. He had told them that Mänäpusō'sa was their elder brother; that he would give them advice and instructions.

Mänäpusō'sa used to go out in the morning and return at night. His grandmother asked him where he went. He said: "You have asked me and I shall tell you. I have to circle this island every day to take care of it. There are some evil beings. These are the great serpents. I quarrel with them to keep them afraid; I keep them off this island; I am put over this island to protect it." He went out and when he returned she asked why he went out. He told her the same thing. Meanwhile the old grandmother thought this over. At night she thought: "I wonder what it may be; why does little Mänäpusō'sa go out to protect this island from harmful monsters?" Then she said to herself: "This must be true. This little Mänäpusō'sa must have power; it may have been given to him by the greater power above to control this island. And I do believe this because little Mänäpusō'sa was the first to be born here on earth, to be the leader and guardian of all things existing on this island. And he must be powerful; I shall have to respect and reverence him." Then the old grandmother knew it. So she said to her grandson: "My grandson, I do know that you are true and great, that you have power over this earth, this island; that you are

the leader and guardian; and that everything is left with you. As you have that power you will do just as you please. You may go where you want to, and never mind me. I am an old woman. I shall be about by myself and away from you. Any time you want me, you shall simply say 'grandmother where are you?' When you say 'Grandmother, come here' I shall suddenly appear to you each time." "Yes, my grandmother, I shall do what you tell me; of course I am to see you only when I want to see you. Then I shall go about the whole earth, visit my little brothers, and see them."

So he did for a few times. Every time he called them his younger brothers. While he was travelling, all at once he thought to himself, "It is not good for me to be alone. I am rather lonesome. If I had a true brother of my kind, I would be enjoying myself with him, talking to him occasionally." He sat down and started to think. "I wonder whom I could find to be a brother to me among all my younger brothers." He considered which of them could be his brother. He carefully thought of them all. He concluded that if he could find a little brother it would be a great happiness for him. He finally thought of the wolves. He saw they were powerful. He thought: "If I could get one of them to be a little brother to me, perhaps things would be better for me." He thought the wolf would hunt for him. "I shall have to become friends with them" he thought. He started off wishing to see the wolves. While on his way he met a group of wolves. He looked at them and stopped. The wolves approached Mänäpus in single file. He saw the one coming in the rear was the largest. That was the father. He was carrying a pack with blankets; the young wolves were ahead about to hunt. "Well, my brother wolf, I have this to say to you. I am lonely; you are my brother. May I go with you and live with you and be in company with you? I desire to follow our sons. If I went along may be I could get a better living from what our sons kill." Then the wolf consented. They went together. When night came they camped. The old wolf said to Mänäpus: "Here is where we will camp." The first came and vomited up his kill. So the second, third, and fourth came and vomited before Mänäpus. He did not like it. They prepared to

camp. They broke boughs of trees and rested over night. In the morning the old wolf said to Mänäpus: "It won't do for you to keep with us. You might not like it. Our sons are always chasing the deer. They are always moving. I don't see how you can keep up with us." Mänäpus listened. The old wolf said: "I will change it. You can live with one of our sons. You better stay so that you won't be walking always. I give you this one," pointing to a white wolf. He was the smartest of all. "He is the fastest of all our sons. I give him to you. He shall take care of you."

That left the white wolf and Mänäpus. The white wolf became a brother to Mänäpus. When Mänäpus saw the white wolf he said to him: "You and I will stay here. You will be my little brother. It won't do for you to be as you are; you shall be changed to something like me." When he said that, they went to bed. When they were going to bed, Mänäpus treated him in such a way as to have him changed. In the morning they woke up. The wolf found himself changed into a human being like Mänäpus himself. Then Mänäpus said: "It is all very proper that you have a form like me; and you will be my younger brother for all time. I will be happy with you from now on to all time. When I was alone I was very lonesome. Now we will be always together. We will be happy. You and I will always stay here. You will always do the hunting for me" said Mänäpus to his little brother, "you will be active as you were in the other form." And so he was. In a very little while every day he fetched a deer home to his brother. Then Mänäpus said: "Your name from now on will be 'Little-brother-to-Mänäpus.'"¹

He kept on hunting till everything froze. They slept that night. In the morning Mänäpus said to his little brother: "Everything is frozen over. There are no gods. There is no one more powerful than you and I. You didn't know it; so I told you. You and I are gods. We alone exist on this earth." In the evening, as he said that, the gods underneath² heard him. They came together.

¹ *Önaxpatä*.

² "Monster snakes" is a stricter rendering. These are located in tiers. Those on the fourth and lowest tier are the most powerful.

"We have heard Mänäpus say he and his little brother are powerful and are as gods on top of the earth. And we know they said it to each other. He has said it and we heard it. Let us underneath gods try to take away Mänäpus' brother as a joke." The next night they took council and said: "Let us now try to get Mänäpus's younger brother away, and keep him four days to see if Mänäpus will know it, and to tease him; although Mänäpus has said he and his little brother are powerful on the top of the earth. And he knows everything." Night came; while Mänäpus slept he saw and heard what the underneath gods said about himself and his little brother. They both knew it during the night. The next morning Mänäpus said to his little brother, warning him: "The underneath gods are going to try to catch you while out hunting." The little brother said: "Yes, I know that too. I saw that last night."

"You and I are the only gods here" Mänäpus said to his little brother, "there are, of course, underneath gods; they do not know." The gods on the first layer, when they heard this, told the gods below them. The ones below were white; these were the greater. They all counselled together. "When we have counselled together and consented, we shall arrange it that the little brother of Mänäpus shall be taken away." The lower gods said: "We have water on the surface of the earth." Of course they had water, but it was frozen. "When he walks on the ice, we will pull him through." It was arranged by the chief gods who were white. They appointed White Deer. They told him that he was summoned by all the gods; that he should exhibit himself on the earth and run where Mänäpus's little brother would see him; that he should entice the little brother across the lake late in the evening so that he would walk on the ice; and so they might entrap him.

White Deer did as he was told. He lay close to where Mänäpus' little brother was camping; so early in the morning the deer started away making a track. When Mänäpus' little brother got up he saw the track and went straight after it. Mänäpus' little brother chased the deer all day long, all over this earth, this island. He had been told by his elder brother that he must return always from hunting before sun-down. While hunting he thought: "My brother

told me not to let darkness overtake me while hunting." He stopped to look at the sun. The sun was nearly down. He was frightened. He quit the chase. He couldn't catch him. He thought: "I will go home now as my brother said." He looked towards where his home was. He undertook to go straight across to it. He started on a run; he came to an ocean. It was ice. He wondered. He could plainly see his brother lived on the other side of the ocean. Of course he had been forbidden at any time to cross water. When he came there, he said: "I will run straight across this, taking my chances. Of course my brother has told me not to; I will reach home before night. If anything happens to me, I will cry out so that my elder brother across the ice will run and assist me." He thought he could run across safely. When he reached the middle of the ocean running on the ice, a roaring noise began underneath the ice. The ice all broke up. He was in the center of it. The water heaved up as if boiling, and he jumped from cake to cake till he got pretty close to the shore. Then he saw he could jump no farther. He called to his older brother: "Mänäpus, I am in danger." While the older brother was lying down at home, he heard his little brother calling him. He heard it plainly. He jumped up and ran towards the ocean to assist his little brother. Then the great monsters underneath when Mänäpus started to help his little brother saw he would be interrupted by the chirping of large birds. The birds interrupted him. He stopped to listen. Then he started on again. When he got to the shore, his little brother had gone down. He was too late. Then Mänäpus walked up and down the bank of the great lake listening for him. All was still. He knew his little brother had cried out at the shore. He wondered and looked, walking up and down the shore. He examined the lake and ice. There was no difference at all. Of course the underneath gods had made it nice again, so that he could see no mark. He started back home. When he got home he lay down. He said: "Why, I am quite sure it was my little brother that called me to assist him down at the lake." Then the sun set just as he said those words to himself. He thought: "Perhaps later in the evening he may return to me." He lay

down. While he was lying down, he said: "Well during the whole night I shall think it over. I will search for him in my sleep. I will follow his footsteps to the place which he reached last. I will find him that way." And so he looked for him in his sleep. He followed his track, and he came to the great body of water that was frozen. He saw the tracks end in that lake. He woke up then. It was morning. Then he found out that his brother was killed. He was very sure of it. His brother had been taken away from him. He had made up his mind: "I shall go around all over the world looking for my brother, enquiring from the monster gods that dwell along the famous shore of the ocean where the great rocks project down to the water, where those spirits dwell, shall ask each and every one of them to tell me if they know anything of his whereabouts."

When he got down to the shore, Mänäpus knew every god that dwelt beneath near the rocky shores. He entered the first god's habitation. "Do you know anything of my little brother? I know that he has been taken away by the gods that live under the water." The other answered: "I have not seen him. I do not know him." Mänäpus continued the whole day asking the gods that live beneath in lonely places, in rocky places; and he did not find out his brother's whereabouts. He returned home at night. While returning home, when he was nearly there, he thought of his brother and was sad. He wondered how his brother came to be lost. He became worse in heart, being sad. Then he neared the place where he first looked for him. When he saw that place it made him grieve, and such feelings came to his heart that he shed tears, thinking the whole matter over. He was nearing home. It was almost night. Then he cried outright for his little brother. Every time he sobbed, and raised his breath, the earth trembled and the waters heaved down to the centre of the earth, almost away from the surface. At the same time the powers of heaven shook and trembled with great effect as the result of his crying.

When he arrived home in the evening, he said to himself: "Those powerful underneath gods that made the trouble by taking away my little brother—I am yet the greater above them. And they

know that I am the greater god with power on the surface of the earth: and they do know my strength." He said this with hard feelings. Mänäpus was talking to himself after dark, when all was lonely. While saying that to himself, the Creator with all his servants heard what Mänäpus said to himself. They knew and believed him. They knew his little brother was taken away and destroyed. Then the Creator said to his servants: "I know something is the matter down on the earth where Mänäpus is. Now we know it after hearing him say so; but before we heard him we did not know that his little brother was taken away from him."

Then Mänäpus said at home talking to himself: "I shall yet wait four days for my little brother to return home. If my little brother does not return within these four days, then I shall be angry and use my power, and I shall go along the shores of the ocean, and, knowing where all the monster gods dwell underneath the earth, I shall pull them out and throw them into the deeper ocean." The Higher God in heaven and his servants heard Mänäpus say that. Mänäpus waited patiently the four days for his brother to return to him. "I shall wait for my brother to be dismissed by the underneath gods, hoping to receive him in the same nature as when he was missing; if my little brother comes to me without being changed from the same body and nature, I shall accept my little brother with friendliness, and, if they have changed him otherwise and he comes to me, I shall still be angry, shall not accept him." He was watching all the time. He knew his little brother was to return by his dream in the night. And he wondered how he would look when he approached him. He saw him coming in shadow, not naturally as when he went hunting; he knew then that the evil monster gods under the earth had dismissed him to come home in that shape. As he saw him, he thought, still vexed with hard feelings, it were best not to allow the shadow of his little brother to enter his former home. He thought it best to say to him: "Go off entirely by yourself away from me as I cannot associate with you any longer in the manner you come. It will not do to keep you in my house with me." Mänäpus saw his little brother approaching. As he saw him approach about to come into the house, Mänäpus

said to his little brother: "You stop there a little while. I want to speak to you forbidding you to enter my home, and your home formerly; I do not accept you to enter in the shape and manner that you come, being a shadow. It will not do for me to have you be the same little brother as before. I therefore advise you to go right on your journey, and follow where the Sun sets—a bit beyond that. You shall make your home there, your fireplace hereafter. There is where you will remain always." His little brother, being obedient, listened to those words, stopped, and said: "Oh my older brother, it is a pity, what you have said to me. You have changed it of your own accord, that which would have occurred in the future with regard to our descendants' children. They would have come back the same as I do on the fourth day; they would have come to life. But since you say I must go, I must go. According to your order, I shall have to obey. But it is a pity that you arrange it so." Then Mänäpus said to him: "All our forefathers' children shall make their dwellings there when they die, with you in the shadow of their spirit." That is the end.

When Mänäpus told his little brother to go his way he was still sad because he had lost his little brother and because the other gods had plagued him so. Then the Creator seeing this said: "Mänäpus will not be content hereafter as he has been offended in that his little brother was sent to him and lost." Then he said to the servants: "Get all together. Arrange it so that Mänäpus will be satisfied. If you do not get together in council and fix it so that he will be happy, then he will make trouble for those that are here between earth and heaven." The servants in the outer layer got together and made arrangements. It was left for one of them to say it. So he said to the two greater gods who were white and who were underneath the ground: "You hurry up and make an entrance from the surface of the earth to where you are so we can hear each other." Then one of the above servants was appointed to tell what they had said together. They told him to go lower down in the midst of heaven and speak from there; and that he could hear the lower gods from there. The underneath gods heard him. They answered that they were willing to do the

work in a hurry in conjunction with the upper servants; and they said a place should be devised to make something new for Mänäpus. Then all the underneath monster gods together said: "Let us agree together and have it understood that the servant shall be told, the one that is lower down in heaven." They told this one to tell the Creator and his servants: "Let it be fixed up there; let the council be there; let a medicine-lodge be built there. It is far better to have it above, for if it was done below Mänäpus would still be dissatisfied." So they met up above. It was appointed by the above servants. All the lower gods were invited. So they went there and met. "Let us build a lodge; let us say how it shall be built, what manner and shape it shall have. Let us have it lie as the sun rises to sun-set; let us have the entrance towards where the sun rises, and the other entrance towards where the sun sets." (So there are two doors, you see, on the surface of this earth.) They made one. After it was made they said to each other: "What further shall be done?" They said to each other: "We are two sides—the good gods in heaven, and the gods under the earth. How shall we be partitioned off from each other? What sides shall we choose?" The underneath gods spoke first: "We will take our side on the north." The good gods said: "We will choose the side where the sun goes south."

They consulted together: "We have built our lodge. We have chosen our sides and are ready. Let us make our selection and let us determine how we will be divided. The lower gods spoke: "We choose four of us to sit near the east door; two of the upper gods and two of the lower gods." At the center of the lodge two upper gods were chosen for the south side; two lower gods were chosen for the north side.

Then they said: "What further shall we do?" While they were consulting, above came the greatest birds of every kind that always reside in the air; and also a good powerful small bird who is called a *mēsīnikāke*. He looked at the council. Meanwhile Mänäpus was at his lodge. He knew what was going on. He saw it. The eight decided: "Let us get the *mēsīnikāke* to invite Mänäpus to come here." He was selected. So he invited Mänäpus: "You are in-

vited to come; I am sent for you." When Mänäpus was suspecting something, he heard a roaring sound approaching him. "Mänäpus, you are invited up above where the medicine-dance lodge is, where the great gods have assembled." He rose and said to him: "Well, my grandfather, you have come to me; you are not the one who should have come; you are not of the side that made me cry for my little brother. Therefore, as you are not of that side, I do not wish to go." Then Mēsīnikāke returned to where he had been sent from by the servants. "Mänäpus refuses to come because you have chosen me from the side that never caused any vexation. It is the lower gods that made him lonely and sad, and gave him the trouble." They said: "It is too bad; it is a pity. We knew we could not get him to come here because the lower gods have made him so angry. The offense is so great; it is known that he had good reason not to come," said the upper gods, 'and it is hard that it has happened.' Then the servants sat still. They remained quiet because they knew they could not get Mänäpus to come after he had refused. Then a voice was heard from the Creator saying to them: "You can not get Mänäpus to come to where you desired because you have offended him so much, have grieved him so much; that is why you can not get him; and he will not come to you. It is very hard." The Creator himself was offended. He found fault with his servants and scolded them for making Mänäpus angry.

It was quiet for a while. Another great god who makes his dwelling near the other island, who makes his dwelling on a high rock, the Otter, knew what was going on. He said: "Why not choose me who am the greatest of all of my kind and who live alone, since you chose the bird and failed to get Mänäpus?" This great otter was known by all our great grandfathers on the earth. It was known that he lived on that rock. He was again heard to say that he was good, had power, and was always helping others out of their troubles. "I am the one. I look beautiful, and have the power to dive and visit all the underneath gods, and, when I see them, I always make them good humored, and make them laugh at me; why not choose me?" he said to himself. Then the Otter in a playful way began to gather all the tiny dust-specks around

at his own lodge. These were colors to paint with. They were the colors of the sky and other great things. By his power he started to that council. He got to the lodge in which they were assembled. He came to the door, opened it, peeped in, and looked at both sides. He said to them: "You have met together to try to get Mänäpus to come to you. Both sides have failed because you have vexed him. I know and see all this, and came to tell you. I thought I would come and tell my fellow-gods 'Why did you not choose me in the first place to get Mänäpus as I am one of the greater good gods of all among you?'" He found fault with them. "You overlooked me, although I am one of the greater powers, and can go through the earth, am jolly, good natured; and I have done every thing that has been done. Why did you overlook me? Now I am going to fetch him to where you want him though you can't get him."

The Otter started. He went to where Mänäpus was, to get him. On his way the Otter made such chirping noises that Mänäpus was lying down with despair. He heard him coming to him. He got ready. The Otter opened the entrance and peeped in. He looked at Mänäpus and said to him: "I have come after you. You must go. Your great-grandfathers with all the other powerful gods are having a council about you. And you must come." In the meantime Mänäpus had said to himself: "This is the one; he is coming to me." He said it again. When he saw the Otter peeping, "This is one of those from beneath, below, of the kind that have offended me. I will go where I am wanted" he said. As soon as Mänäpus heard the Otter's words he started suddenly with power. He seized his tobacco bag. He jumped and looked at where the Otter had peeked through, and did not see him. He went out to see where the Otter was. He looked up, and he saw the Otter already was nearly out of sight, so swiftly did he go with his power. Mänäpus started with power as fast as he could; he came to the second or third layer. There was where he stopped. The Otter arrived at the council place and peeked in, and said to them: "I have now got Mänäpus. He is coming." Both sides thanked the Otter when they learned that he had succeeded in fetching Mänäpus.

Mänäpus immediately arrived at the east end of the lodge. He paused there awhile. He thought: "I wonder which is the proper side to enter this lodge." He raised the flap and examined how the gods were seated. He saw the underneath gods on the north side; that was his right hand side. He looked at the south side. He saw the upper gods there. "I am right. Now I know." Then he entered. "I shall choose to take the right hand side. I will pass by them; those are the ones who have caused me great trouble, affliction, and sorrow." As he went, he passed the underneath gods; and made a circle-walk in the *mitewīkan* (medicine-dance lodge); he went to the west flap and proceeded to the east flap. He stood there for a moment and looked them all over. The underneath gods were on the right. He looked at them. They said to him: "Sit right here near the door at our left hand side." He sat down there. One of the four said: "Mänäpus, you are invited into this lodge. You now see all your grandfathers here in grandeur; and this *mitewīkan* as it has been prepared to satisfy you; and you see its interior decoration as has been purposely made for you to enter and be pleased the way it has been prepared to wipe away your anger. You are permitted to be given presents." This was done to wipe away his sadness. "Now Mänäpus, we wish to tell you not to be offended. All your grandfathers inside this *mitewīkan* have made a great mistake in taking away your little brother and the trouble they have caused, your grandfathers not knowing. Be not offended, for all your grandfathers have concluded to do this to make it right; and your grandfathers wish you to choose this way of this lodge, and they are all and each of them going to give you their medicine-power of different kinds of roots that grow on this earth; and each of them a *mākēsēmōawan*."¹

Then Mänäpus, after hearing the four old men, asked them to show him the good and evil of the medicine bags; and the name of each root. "Let me examine them" he said. "Before I accept them you must tell me how they are used and what they are good for." (He was suspicious and did not want to be cheated.) He took them up and looked at them. "I will accept this; it will be

¹ A medicine bag.

good for the children of my parents in the future" he said to the first. He did the same to the rest. Then he sat down where he first came in. He was given a clam shell with powder, a little water, and a bead. He was told to drink it. He drank it and became the leader. "You will now be a member. From now on your children will have to do this to become *mitä'wiw*¹. Your grandfathers give you this in order to make good to you what had wrongly been done to you before" he was told.

"Now Mänäpus, you have truly taken this. Your grandfathers have given this to make good to you that which had been wrongfully done to you before: which you may now forget and forgive. Be very careful; listen and take heed; and follow what your grandfathers here in this lodge have given you. Receive it well with honest good faith that the people in the future may follow as you have done, and do it well. Now Mänäpus this is done to stop your lamenting for your little brother who was taken away." It took four days for the grandfathers to instruct him and make him forget his little brother. There were no clouds, no wind. It was calm and noiseless. In the south breezes came to the lodge; all the great birds flew in circles overshadowing the lodge for these four days.

In order to pacify Mänäpus they took him into the *mitewikan*; they gave him the drink. They then told him: "Now Mänäpus, we have given you the drink to make you a member of the lodge. Now you will make your circle-walk. Go down on the right hand side." He made a circle towards the west door, went around to where he started from, the east door. He stood there a while. The four on the north side had accompanied him. They told him: "Now Mänäpus, you face the west. You see your four grandfathers seated on the south, which is a grand sight. Look down there. Still farther beyond the four near the west door you have noticed a spot, a grand blue spot representing the sky. This is what your great grandfathers apportion to you and want you to take. Now take your walk again." The four put Mänäpus in front of them, and followed down towards the west door by the right hand side. When

¹ That is a member of this society, the *mitä'wit*.

they got to the west door, they told him: "You see this grand spot, your spot, which resembles sky-blue." Of course Mänäpus saw the place. He did not know what it represented. They showed him and told him: "You sit down here." This was near the west door in the center. The advisers from the east door came up the south side, right to the east door, and took their places where they had started from. When they were seated, one of them stood up. He spoke out so that he was heard. He said: "Now you other four that are seated opposite each other in the center, now all of you get up and approach Mänäpus where he is seated near the west door, and shoot at him with your beads (*mēkēsuk*)." These two seated on the north started with their medicine bags. They went towards the west door. They made a circle and when they were back they invited the two at the south in the center. They came up to where the east door was and stood there with their *mēkēk*;¹ there were several kinds; some had in their hands serpents, some great birds as medicine bags. The leader said to Mänäpus: "This is what your great grandfathers present to you. We are going to throw them, our *metemēkis* (the little beads) which are in the medicine bags." The leader said, "I am going to shoot at you, insert into you what your grandfathers here have given you to be entered into you." He then had his otter medicine bag pointed at him. He fetched the medicine bag's head to his mouth and blew into it saying "I am going to transfer it to Mänäpus." He had blown into the head of the bag. He started on a dancing run towards the western door, down the right hand side, crying out at the same time as he approached Mänäpus "*Wī i hī hī*," making motions how he was going to shoot him. When he got there he shot Mänäpus full in the breast; the *mēkēsi* struck him squarely in the breast as Mänäpus was seated there. As soon as the bead struck him, he felt it. His whole body quivered, feeling its power. The other three were in single file; they passed in front of him, and came up the south side and came up to the east door from which they had started. The leader made a little circle so as to be at the rear of the other three. The second man (who now was leader) said to Mänäpus: "I am going to shoot

¹ Medicine bags? *Mēkēk* means 'otter.'

at you after your grandfather's ways, the way it is given you." He raised his medicine bag to his mouth and blew into it. Then he started on a dancing run with his bag stretched out to shoot Mänäpus when he got to him. He shot at him right in the breast, and ran by, the other three following him. They came up to the east door and stood there. He made a little circle and went behind the other three. The third man was now leader. He said: "If I am allowed to shoot into you and take effect, it shall be so; if I have not the power to do so, it will not be so." He took his medicine bag and blew into it. He started on a dancing run, going down the north side to the west door, holding the bag outstretched, crying out "*Wī i hī hī*" as the other two. When he passed by Mänäpus he shot at him. He took effect and made Mänäpus' flesh shake as the first two. They came to the east door in single file. They stood there a moment. The leader made a little circle and took the rear. The fourth man was now the leader. He talked out loud and said to Mänäpus: "Now Mänäpus, this is the will of these all your grandfathers in the lodge. They are giving it for you to take. And you have already accepted it; and what I say, if it is the truth, will affect you from the sign of this *mēkēsi* (bead) out of the medicine bag. If it takes effect, it will show; it will knock you down. I am now going to shoot at you. If it goes through you it has taken its effect." He pulled up his medicine bag and blew into it. He began on a lively crouching dancing run; as he approached the proper place he shot at him. When the shot reached Mänäpus, Mänäpus fell. That showed it hit him in the breast, had penetrated him. He fell flat on his face. His hands were shaking. One of the four at the east end on the north side went down there quickly and said to the four who were there: "Hurry up and revive this Mänäpus. Hurry up and get that shot out of him. Hurry up and do it." They lifted him, and shook him to get that shot out of him. When they raised his head a little bit from the ground, the *mēkēsi* dropped out. They saw it. The one who started from the east door picked it up. In the meantime Mänäpus revived, came to life again. The man said: "Now you have revived from the fourth man's shot, and now (putting it in Mänäpus' hand)

you take this. Shoot at yourself." He threw it at his mouth; it knocked him down as the fourth man had done. The man from the east shook him and got it out of him. He put it in Mänäpus's hand and told him to shoot himself again. It knocked him down. Then another man from the east door came down. The same thing happened. The third one ran down and (gave?) his *mēkēsi* to the leader. The same thing happened. The fourth man ran down. They gave Mänäpus a medicine bag. The head-leaders said: "These shots which have been taken out of you are the same shots as the first four shot at you. You have received your medicine bag. You blow into your medicine bag. Now these shots that entered you, you saw them. They are out of you. You blow on your medicine bag and shoot at the four of the south side. Those beads belong to them. Blow them where they belong." He shot from the west door at the first man. He knocked him down. He fell slowly. He shot the second, third, and fourth. It did not affect these four. They were merely examples. They had shot Mänäpus to instil their religion into Mänäpus.

The four returned to their seats. Mänäpus was ordered to the east door to receive instructions. He was told: "Now the work we have done in you is fulfilled and you have accepted it; and the reason why this was done by your grandfathers here, was given to you who received it from the Greater Creator, was to satisfy you for losing your little brother, and on account of your crying and sadness. It was to coax you to be satisfied; you will therefore, after receiving this, teach your people in the future to do this which we have given you so that they may be saved." Mänäpus said in return to the four at the east end on the north side, "Is that all I get from you, my grandfathers, that which you have given me?" He said: "Can not you give me anything extra besides that? I would like you to give me your valuable medicine roots to help cure mankind; so that if I got them from you I might give them to my people to use, those that shall live in the future." They said in response to him: "Well then, Mänäpus, you have received many and great things from your grandfathers, this *mitewin* and its teachings; and we advise you to be very careful to teach your

parents and the people always to follow it; and to teach your parents to do in the future what we have now told you. In the meantime you will teach them so that they will have something with which to help themselves. Of course some will be sick and die. When you find it so, you will tell them to make a lodge such as we see now; and have this dance performed in the manner it has been told; and those medicines which you ask for are given to you by your grandfathers which were given them by the Greater Creator. Be careful that this is not lost by the future people. You will be the leader."

Mänäpus said in reply: "Well, my grandfathers, you have said everything well, what you have said. But there are two different articles that I fear to have come to my people lest they may not get along well in this world. You have now presented me with your herb medicines. Among them I do not wish you to have bad roots of the evil kind so that they might harm my parents' people and injure them. I simply ask of you and accept only your good honest best-curing medicine roots, as there will be an evil spirit in this world which will mingle with this religion which you have given me; and I do not want any of this mixed with it; if you still can give it so, give it to me so my people may increase. And of the religion which you have given me, I want only what is good in it. I will accept it if the Creator permits you to give it that way."

THE GIRL WHO FASTED TOO LONG

Her mother told her to fast; it was on the Menomini river. The old lady lived there with her daughter. She took her to a certain place and told her to fast silently. And also the girl fasted by herself.

Meanwhile the mother went down and asked the daughter what she had dreamed of for happiness up to that point. Her daughter answered her: "Mother, you have placed me here to fast, and I have accomplished something by my fasting. It is enough. I want you to let me eat." The mother said: "It is not enough. You have not accomplished much. You shall fast a number of days longer to make it more certain about your dream."

The girl insisted that she should be allowed to eat because she had already gained something great by fasting. Her mother still insisted on her daughter fasting. The daughter had to obey her mother, though she had fasted enough. Her mother left her there.

After the appointed time, the mother went to where the daughter was fasting. She was not where she had been fasting. The mother saw traces of a body of water that encircled the place where the young girl had fasted. She found that the water had taken the young girl under the ground, and she saw the specks of earth. This was done because the girl had fasted too long although she had [previously] received her dream.

There is a large, high, dismal hill on the banks of the Menomini river where the girl was fasting. It was from there the water came up by the power of the monster who dwelt there.¹

WHY HUMAN BEINGS HAVE TWO TOTEMS

Mänäpus was existing by himself, and the animals were put here. He saw all of his little brothers. He spoke to all of them. One time he said: "Prepare, select what you choose to eat on the earth." The wolf said: "I want to eat the deer; I want it to be so." The deer went its way. The wolf went its way. He came across the deer's track. "This is what I chose to eat. I have to pursue him." So he started after him. They were both good runners. The wolf chased the deer all day. The deer ran all over this island. The deer got tired in the evening after running all day. The wolf chased the deer till the latter got tired. He ran to the ocean. When he got to the shore he said: "May I become a *taḡkōmik* (herring?)." As soon as he touched the water he turned into a fish. The wolf, being on his trail, tracked him into the water. He saw where he had gone along the shore. He knew that he had turned into a fish. The wolf said: "May I be a salmon." He became a salmon, and started to chase the fish. He caught him and ate him. The salmon returned to the shore. He turned back to a wolf. He returned to his dwelling place. Mänäpus knew

¹On the dangers which may arise from continuing to fast after receiving the blessing, compare Jones' Fox Texts, p. 182 ff.

that the wolf told the truth when he said he desired deer as his food.

After a while the deer came back in his shadow to where he had started from. The wolf saw the deer's shadow and said to him, "I have proved to you what I said by catching and eating you. You will be my food as long as the earth exists" he said to the shadow of the deer. So the deer and the wolf are alike. So it comes that a human being has two totems.¹

BUREAU OF AMERICAN ETHNOLOGY,
WASHINGTON, D. C.

¹This myth begins like the one recorded by Hoffman, p. 201, of the *14th Annual Report of the B.A.E.* It should be noticed that the Wolf and Deer belong to the same phratry (see Hoffman, *ibid.*, pp. 41, 42). I suspect that the Deer-Herring, and the Wolf-Salmon are friendship-groups; and that Hoffman's lists need revising. I was told a certain man had three totems, to wit, the Bear, Mud-turtle, and Porcupine. These are intimately associated according to Hoffman, *l. c.*, p. 42. I regret my stay among the Menominee was not long enough in duration to unravel this matter. It deserves further investigation.

THE PRESENT STATE OF OUR KNOWLEDGE CONCERN-
ING THE THREE LINGUISTIC STOCKS OF THE
REGION OF TIERRA DEL FUEGO,
SOUTH AMERICA

BY ALEXANDER F. CHAMBERLAIN

IN so far as the distribution of human languages is concerned, there is a marked contrast between the southern extremity of the American continent and the long fringe of Arctic coast, from Labrador to the Pacific. The latter is or has been occupied, together with parts of Greenland and the Arctic islands, by the Eskimo, a people speaking one language, with no serious differentiations such as occur in many other linguistic families,—over this area extends but one stock. Tierra del Fuego, on the other hand, has still within its borders representatives of three independent linguistic stocks, the *Alikulufan*, the *Onan*, and the *Yahganan*; and it is even possible that one or two others may have formerly existed in this same area. The Arctic archipelago and the long narrow fringe of coast count but one family of speech, the Fuegian region three such stocks. This conclusion has not been disturbed by the most recent investigations; efforts to make out the Onan to be a Tsonekan (Tehuelchean) dialect have not been successful, nor has any real relationship between Alikulufan, Onan, and Yahganan been proved to exist. Distribution maps of the Fuegian stocks will be found in Bove, Hyades and Deniker, and Furlong.

I. ALIKULUFAN

The territory of the *Alikulufan* (or *Alikalufan*) stock includes the northwestern section of the archipelago of Tierra del Fuego: Brunswick peninsula and King William Land (with part of the coast to the northeast), Desolation Land, the islands of Santa Inez, Clarence, Dawson, etc.; also part of the island of Tierra del Fuego proper, from Admiralty sound west. The Alikuluf probably

occupied also the west coast of the island of Tierra del Fuego, north from their present location to the Straits of Magellan, and likewise a strip of coast on the Punta Arenas side of the straits. The Alikuluf, who number but a few hundred at most, are the *Alik-hoolip* of Fitz-Roy, the *Alakaluf*, *Alacaluf*, etc., of English missionaries, the *Alakalouf* of certain French writers, etc.

The chief literature relating to Alikulufan linguistics is contained in the following titles:

1. BEAUVOIR, J. M. Pequeño diccionario del idioma Fueguino-Ona, Buenos Aires, 1901, pp. 60. See further under *Onan*.
2. BOVE, G. Expedición austral argentina. Informes preliminares presentados á los ministros del interior y de guerra y marina de la República Argentina, Buenos Aires, 1883, pp. XXVI, 217.
3. BRINTON, D. G. The American Race, N. Y., 1891, pp. xvi, 392.
4. ——. The Hongote Language and the Patagonian Dialects. At pages 45-52 of his *Studies in South American Native Languages* (Phila., 1892).
5. ——. Further Notes on Fuegian Languages. Proc. Amer. Philos. Soc., vol. xxx, 1892, pp. 249-254.
6. FENTON, T. Vocabulary. In Hyades and Deniker (q. v.).
7. FITZ-ROY, R. Narrative of the Surveying Voyages of His Majesty's Ships *Adventure* and *Beagle*, between the Years 1826 and 1836, describing their Examination of the Southern Shores of South America and the *Beagle's* Circumnavigation of the Globe, 3 vols., with Append. and Addend., London, 1839.
8. DE LA GUILBAUDIÈRE, J. Vocabulary. See Brinton (No. 5), Marcel, M. G.
9. HYADES, P. et DENIKER, J. Mission scientifique du Cap Horn, 1882-1883, tome VI, Anthropologie, Ethnographie, Paris, 1891, pp. vii, 422.
10. MARCEL, M. G. Les Fuégiens à la fin du XVIIe siècle d'après des documents inédits, Paris, 1892, pp. 20.
11. MITRE, B. Catálogo razonado de la sección lenguas Americanas. Con una introducción de Luis María Torres, tomo I. Buenos Aires, 1909, pp. xliii, 411.
12. SPEGAZZINI, G. Apuntes filológicas sobre las lenguas de la Tierra del Fuego. Anales de la Soc. Científ. Argent. (Buenos Aires), vol. xviii, 1888, pp. 33ff.
13. ——. Vocabularios Ona, Yaghan y Alacaluf. Ms. See Mitre, *Catálogo*, p. 176.
14. *The Voice of Pity for South America* (London), vols. I-XIII, 1854-1866.
15. WEDDELL, J. A Voyage towards the South Pole in the Years 1822-1824, containing an Examination of the Antarctic Sea to the Seventy-Fourth Degree of Latitude, and a Visit to Tierra del Fuego, with a particular Account of the Inhabitants, London, 1827, pp. iv, 432.
16. WILSON, J. Vocabulary. See Fitz-Roy, R.; Hyades, P. et Deniker, J.

The Alikulufan linguistic material in Fitz-Roy consists of a vocabulary of 208 words (compared with Tekenika, i. e., Yahgan), obtained by Dr J. Wilson, but no grammatical data. The Wilson vocabulary is reprinted by Hyades and Deniker, together with the equivalents (pp. 272-277) of the same taken down from an Alikuluf woman of Orange bay. Also 46 words, obtained in 1883 from Dr Thomas Fenton, who had taken them down, in 1876, from three young Alikuluf women at Crooked Reach, and verified by Hyades and Deniker at Punta Arenas by an Alikuluf boy, nine years old, who likewise gave 13 other words. The Fenton vocabulary differs notably from the Alikulufan proper, indicating great dialectical variation, if not, indeed, the presence of another linguistic stock altogether. Of the Alikulufan vocabulary in Fitz-Roy, Hyades and Deniker observe (p. 270) that it seems to be much more accurate than the corresponding Yahganan one.

Of the four Fuegians—the source of most of the linguistic material in Fitz-Roy—who had been taken to England by the *Beagle* on the first voyage in 1830, York Minster (26 years old), Boat Memory (20 years), and Fuegia Basket (9 years) were Alikuluf, while Jemmy Button (14 years) was a Yahgan. Boat Memory died of small-pox in England, but the other three were on board the vessel, when the famous Charles Darwin began his voyage round the globe, so significant for the development of biological and anthropological science. In his *Journal*, Darwin has left us his impressions of these aborigines, who were restored to their native land, when the *Beagle* reached Tierra del Fuego again in 1832. On the voyage over, Jemmy Button is said to have learned the Alikulufan language and to have forgotten, largely, if not entirely, his mother-tongue, by the time of his return. He soon learned it again, however. This accounts for certain contradictions and discrepancies in the linguistic data ascribed to him (e. g., in *The Voice of Pity*, vol. vi, 1859, p. 21), as Hyades and Deniker point out.

Weddell gives (p. 273) four "Fuegian" words, of which the exact affinities have not yet been made out; one, at least, and possibly two, may be Alikulufan. Weddell's words, which were ob-

tained in 1823, are reprinted in Hyades and Deniker (p. 263) and Mitre (p. 159). The material in Brinton's *American Race* (p. 364) consists of 16 words with the numerals 1-4, and appears to have been derived from Fitz-Roy. It is repeated in his paper of 1892 (No. 3).

Marcel publishes (pp. 17-20) a vocabulary of "Fuegian" words, compiled in 1698 by Jean de la Guilbaudière (or Guibaldière), a filibuster, who lived for some time on the Straits of Magellan. This vocabulary, of some 300 words and phrases, seems to be more or less Alikulufan, which would make it the earliest Ms., but not printed, record of the language. Mitre (p. 158) considers it "at base Alikuluf." Brinton (*Further Notes on Fueg. Lang.*, p. 250) publishes 22 words from De la Guilbaudière's vocabulary with comparisons with the "Alikoulip" of Fitz-Roy. The Ms. vocabulary of Spegazzini, according to Mitre (p. 177), has only a brief list of Alikulufan words, those of Yahgan and Onan being much longer; he spent but a few days among the Alikuluf. His *Apuntes filológicos* likewise contains little concerning the Alikulufan, being chiefly concerned with Onan and Yahgan. The Onan *Dictionary* of Father Beauvoir contains a comparative vocabulary of 41 words including Alikulufan. The etymology of the name *Alikuluf*, *Alacaluf*, *Alikoulip*, etc., is unknown. It is doubtless of aboriginal provenance, but may not be Alikulufan in origin.

II. ONAN

The territory of the *Onan* stock includes, or included, the northern and eastern portions of the large island of Tierra del Fuego, the south of which belongs to the Yahgan, and a part of the west to the Alikulufan. Mitre (p. 167) states that "they extend in Tierra del Fuego from the north coast on the Straits of Magellan to Cape San Pablo eastward on the Atlantic; and on the west to Inutil bay and the center of the archipelago. The map given by Furlong (p. 225) shows the Ona occupying both sides of Admiralty sound and all the southeastern coast of the island of Tierra del Fuego, with former extension over all the northern portion. These Indians are known to various writers by a considerable diversity of names

(Aona, Aonik, Ona, Onas, Oensmen, Yacana, Yacanas, Yacanacunni, etc.), some of which, wholly or in part, are probably of Tsonekan (Tehuelchean) origin. According to Lehmann-Nitsche, the Ona, whom he prefers to term Tshon, of northern Tierra del Fuego are called Shilk'nam, and those of the south, now extinct, Manekenkn (the dialects of both have been studied by Bridges). The Ona country has been recently traversed by Furlong, who made special investigations of their life and customs. In his opinion (p. 447) the Ona in the last 30 years have decreased in numbers "from 3,000 to 300."

The chief sources of information concerning the linguistics of the Onan stock will be found in the following list:

1. BEAUVOIR, J. M. Pequeño diccionario del idioma Fuego-Ona con su correspondiente castellano. 1a y 2a partes. Por un misionero Salesiano de la Tierra del Fuego, Buenos Aires, 1901, pp. 60.
2. BOVE, G. Op. cit.
3. BRIDGES, L. Vocabulary and Phrases of the Language of the Onas. Ms. (pp. 32), in the library of the Museo Mitre of Buenos Aires. See Mitre, *Catálogo*, p. 164.
4. BRINTON, D. G. The American Race, N. Y., 1891, pp. xvi, 392.
5. —. Further Notes on Fuegian Languages. Proc. Amer. Philos. Soc., vol. XXX, 1892, pp. 249-254.
6. FURLONG, C. W. Into the Unknown Land of the Onas. Harper's Mo. Mag., vol. CXIX, 1909, pp. 442-455.
7. —. The Vanishing People of the Land of Fire. Ibid., vol. CXX, 1910, pp. 217-229.
8. —. See forthcoming book of the author on Tierra del Fuego, etc.
9. DE LA GRASSERIE, R. De la langue Tehuelche. Verh. d. XVI. Intern. Amerik.-Kongr. (1904), Stuttgart, 1906, pp. 610-647.
10. HYADES, P. et DENIKER, J. Op. cit.
11. LEHMANN-NITSCHKE, R. El grupo Tshon de los países magellánicos. Resumen No. 47. XVII Congr. Intern. de los Americanistas, Sesión de Buenos Aires 16 al 21 de mayo de 1910.
12. LISTA, R. Viajes al país de los Onas. Tierra del Fuego, Buenos Aires, 1887, pp. 146.
13. MITRE, B. Op. cit.
14. POPPER, D. J. Exploración de la Tierra del Fuego. Bol. Inst. Geogr. Argent. (Buenos Aires), vol. VIII, pp. 75 ff.
15. SEGERS, P. A. Hábitos y costumbres de los indios Aonas. Ibid., vol. XII, 1885, pp. 41-82. See Brinton, D. G.

16. SPEGAZZINI, C. *Apuntes filológicos* (No. 11 under *Alikulufan*).

17. ——. *Vocabularios* (No. 12 under *Alikulufan*).

Of the Ona Ms. vocabulary in the collection of the Museo Mitre in Buenos Aires we are told by Mitre (p. 164) that the author, who is the son of the Anglican missionary, Rev. Thomas Bridges, "was born at the Mission of Ushuaia, founded by his father, and learned the Ona language from childhood, which makes this the most accurate vocabulary of Ona in existence." This, however, is probably an exaggeration. Hyades and Deniker indicate the extension of the Onan stock on their map, but give no vocabulary. Lista gives a vocabulary of 85 words of the southern and one of 27 words of the northern Ona; he also compares Onan with Tsonekan (Tehuelchean), but without proving relationship. Brinton, in his *American Race*, gives no Onan vocabulary, but, while recognizing (p. 331) an "Ona linguistic stock," he observes also (p. 329) "the tongue of the Onas . . . is apparently connected with the Tsoneca or Patagonian." In his paper *Further Notes on the Fuegian Languages*, he discusses the alleged relationship of Onan and Tsonekan, using particularly the material of Seger,—also Popper's brief vocabulary, which he reprints (pp. 252–253). Seger, who lived for three years in Tierra del Fuego, had composed a dictionary of the Ona language, which was lost in shipwreck; hence his article contains besides the vocabulary only a few notes on word-composition, etc.

Spegazzini's *Apuntes filológicos* contains a comparative grammatical sketch of Onan and Yahganan, with some references to Alikulufan, while his Ms. in the Mitre Museum gives extensive Onan and Yahganan vocabularies, and a few Alikulufan data. The *Dictionary* of Father José M. Beauvoir, besides a comparative vocabulary of 41 words in many tongues, including Onan, Alikulufan, and Yahganan, contains 1876 words, 132 proper names of persons and places, 76 phrases, etc. The Onan text of the Pater Noster is also given. The dialect represented is that of the Indians frequenting the missions of Rio Grande de la Tierra del Fuego and San Rafael de Dawson, and the author had as efficient interpreter and collaborator Kalapakta, or José Calafate, a youth of 13 years, at the mission of Candelaria, Rio Grande.

There is considerable doubt as to the origin of the name *Ona*, or *Aona*, by which these Indians have come to be generally known. It is said to signify "people" and to have been the ethnic appellation of at least a portion of the stock. It may be of Yahganan provenance, as some believe. Furlong and others have also suggested that it is a corruption of *Tsoneka*, or *Tso'na'ca*, the name of the Patagonian Indians. Dr Lehmann-Nitsche, who affiliates the Onan with the Tsonekan or Tehuelchean, proposes to style the combined group *Tshon* (cf. the Hispanicized geographical name *Chones*, etc.). He thinks that *Ona* "is a corruption of *Tsh'n*, due to the Yamanas (Yahgan), who transmitted it to the European missionaries."

III. YAHGANAN

The territory of the *Yahganan* stock includes, or included, the southern coast of the large island of Tierra del Fuego, from end to end, and the entire archipeligo of the south: Navarin and adjacent isles, Cape Horn is., Host, Gordon, Londonderry, Basket, etc. In 1884 a number of Indians were settled at Ushuaia, the mission founded by Rev. Thomas Bridges, the Anglican missionary (d. 1898), to whose labors so much of the Yahganan linguistic material now in existence is due. In 1884 the total number of these Indians was stated by Mr Bridges to be 949; but, by 1890, as the result of epidemics of disease, etc., their number had been reduced to less than 300, according to Hyades and Deniker (p. 391). Of these 100 were on the Wollaston is., 60 at Downeast (a settlement of Bridges), 40 around Ushuaia, and the remainder canoe-nomads. Furlong states their number to be at present "perhaps 175." Denucé (p. 652) cites Lehmann-Nitsche as giving their number as "less than 80," as compared with some 3,000 in 1862.

The chief linguistic material on record for the Yahganan stock will be found in the following list:

1. ADAM, L. Grammaire de la langue Yâgane, Paris, 1885, pp. 60. See also *Revue de Linguistique*, vols. XVII-XVIII, 1884-1885.
2. BEAUVOIR, J. M. Op. cit.
3. BOVE, G. Op. cit.
4. —. Patagonia, Tierra del Fuoco, Mari Australi. Parte I., Genova, 1883.

5. BRIDGES, T. Dictionary of the Yahgan Language, Mss., 2 vols., 1869-1879. Brought to Brussels by the Belgica Antarctic Expedition in 1897-1899. See Denucé, J.
6. —. Goslpl Lyc Ecamanaci. The Gospel of S. Luke translated into the Yahgan Language, London, 1881.
7. —. See Ellis, A. J.
8. BRINTON, D. C. The American Race, N. Y., 1891, pp. xvi, 392.
9. —. On the Hongote Language and the Patagonian Dialects. At pages 45-52 of *Studies in South American Native Languages* (Phila., 1892).
10. —. Further Notes on Fuegian Languages. Proc. Amer. Philos. Soc., vol. XXX, 1892, pp. 249-254.
11. DARAPSKY, L. Estudios lingüísticos americanos. Fueginos. Bol. Inst. Geogr. Argent., vol. x, 1889, pp. 276-289.
12. DENUCÉ, J. Note sur un vocabulaire complet de la langue Yahgane. Verb. d. XVI. Intern. Amerik.-Kongr., 1908, Wien, 1910, pp. 651-654.
13. EIZAGUIRRE, J. M. Tierra del Fuego. Recuerdos e impresiones de un viáje al extremo austral de la República Argentina. Precedido de un introducción por el ingeniero Julio Popper, Cordoba, 1897, pp. xv, 279, 6.
14. ELLIS, A. J. Address of President. Proc. Philol. Soc. (London), 1882.
15. FITZ-ROY, R. Op. cit.
16. FURLONG, C. W. Amid the Islands of the Land of Fire. Harper's Mo. Mag., vol. CXVIII, 1909, pp. 33-347.
17. —. Southernmost People of the World. Ibid., vol. CXIX, pp. 126-137.
18. —. See forthcoming book of author on Tierra del Fuego, etc.
19. GARBE, R. Eine vollständige Grammatik des Yâgan und ein Vocabular von ca. 30,000 Wörtern. Götting. Gelehrte Anzg., 1883, vol. 1, pp. 336-376.
20. HYADES, P. et DENIKER, J. Op. cit.
21. DE LUCY-FOSSARIEU, P. Ethnographie de l'Amérique antarctique: Patagoniens, Araucaniens, Fuégiens, Paris, 1884.
22. MITRE, B. Op. cit.
23. MÜLLER, F. Die Sprache der Feuerländer (Jâgan). In *Grundriss der Sprachwissenschaft*, IV. Bd., 1, Abt., Wien, 1888, pp. 207-221.
24. PLATZMANN, J. Glossar der feuerländischen Sprache, Leipzig, 1882, pp. lviii, 266.
25. *South American Missionary Magazine* (London), Vols. 1- (1867-).
26. SPEGAZZINI, C. Vocabularios Ona, Yaghan y Alcaluf. Ms. (in Italian) in Museo Mitre. See Mitre, B.
27. —. Elementi di grammatica Iaghan, sistema Ollendorff. At pages 179-189 of Mitre's *Catálogo* (1909).
28. —. Apuntes filológicos. Op. cit. (No. 12 under *Alikulufan*).

The Yahgan linguistic material in Fitz-Roy consists of a vocabulary of 208 words, with corresponding terms in Alikoulip

(Alikulufan). This is reprinted by Hyades and Deniker (pp. 265-270) and compared with the equivalents of the same words as obtained by them. Of the Tekenika (Yahgan) vocabulary in Fitz-Roy, Hyades and Deniker observe (p. 270), that at least 120 words "are entirely wrong," while the numerals 4-9 "do not exist in Yahgan." The work of Hyades and Deniker contains also an extensive French-Yahgan vocabulary, classified according as the words relate to earth, air, water; place-names; names of plants, etc.; names of animals, birds, fishes, insects, mollusks, etc.; names of the body, its parts, members, organs, etc.; words relating to movements, emotions, physiological states and actions, etc.; words relating to the family; words relating to the house, utensils tools, arms, ornaments; words relating to the actions of material life; words relating to the feelings; affixes; adjectives; pronouns; adverbs; interjections; made-up words and loan-words from English, etc. In addition to this classified and annotated vocabulary, which occupies pages 280-321, there is given (pp. 321-334) a brief sketch of Yahgan grammar, including (pp. 322-332) conjugations of the verbs "to love," "to give," and a number of phrases. At pages 335-337 the alphabet adopted by the English missionary for transcribing Yahgan is discussed.

The Yahgan version of the *Gospel of S. Luke* by Rev. T. Bridges was published anonymously by the British and Foreign Bible Society. It has been the basis of a number of studies of the Yahgan language by various writers: The grammatical sketch of F. Müller, the grammar of Adam, the monograph of Garbe, the glossary of Platzmann, etc. Brinton's brief Yahgan vocabulary in his *American Race* (p. 364) is from Bridges, as is also his material of 1892. Mitre (pp. 160-161) gives a brief letter of Bridges, dating from 1898, on the Fuegian tongues in general. In Ellis' Presidential Address are included an outline of Yahgan grammar by Bridges and the native text of a letter from a Yahgan to that missionary. In his *Glossary*, Platzmann gives, besides the vocabulary, notes on the missionary alphabet, the proper names in the texts, the English loan-words, etc.; likewise the Yahgan texts of the Parable of the Sower, the Pater Noster, and some plant-names, etc. The mono-

graph of Garbe is more scientific than the work of Platzmann, which he criticizes. It contains a somewhat detailed exposition of the Yahgan tongue. The Ms. "Dictionary of *ca.* 30,000 words" is the same as the one frequently referred to by ethnologists as indicating the extent of the vocabulary of primitive peoples. The final editing of this work was begun by Mr Bridges in 1877, and the Ms. completed in July 1879. Bridges' *Dictionary* was brought to Europe by the Belgica Antarctic Expedition of 1897-1899. His Mss. were also placed earlier at the disposition of Bove, etc. According to Denucé, Bridges' *Dictionary* was in process of publication in 1908 but its appearance had been delayed by various obstacles. When the matter was discussed at the Congress of Americanists in Vienna, Dr F. Boas expressed the hope that the work of Bridges might appear as "an etymological dictionary" and not in such a form as that of the Riggs *Dakota Dictionary*, which really "ought to be republished in the form of an etymological dictionary."

L. Adam's *Yahgan Grammar* of 1885, which is based on Bridges' *Gospel of S. Luke* and Garbe's monograph, is résuméed by Mitre (pp. 168-172). The Yahgan material in Darapsky is chiefly a grammatical sketch, with comparisons with other American aboriginal tongues. Bove gives an extensive vocabulary, likewise a distribution map. In Eizaguirre are two brief Yahgan vocabularies. Mitre (pp. 179-189) prints Spegazzini's *Elements of Yahgan*, consisting of seven Ollendorffian "lessons" in Italian and Yahgan. Spegazzini's *Apuntes filológicos* contains an extended grammatical discussion of the Yahgan language, and his Ms. vocabulary is quite large.

CLARK UNIVERSITY,
WORCESTER, MASS.

ANTHROPOLOGY AT THE PROVIDENCE MEETING WITH
PROCEEDINGS OF THE AMERICAN ANTHROPO-
LOGICAL ASSOCIATION FOR 1910

By GEORGE GRANT MACCURDY

THE annual meeting of the American Anthropological Association was held in Providence, R. I., December 28-30, 1910, in affiliation with the American Folk-Lore Society. The sessions were held in Manning Hall, Brown University. In the absence of President William H. Holmes, Professor Roland B. Dixon presided. The attendance was good and a number of important papers were presented. On the morning of December 29 there was a joint meeting of the Association and the Archæological Institute of America in Union Auditorium at which Miss Alice C. Fletcher presided.

BUSINESS MEETING OF THE ASSOCIATION

Members of the Council present were Miss Alice Fletcher, R. B. Dixon, G. G. MacCurdy, J. R. Swanton, A. F. Chamberlain, R. H. Lowie, E. Sapir, E. L. Hewett, A. M. Tozzer, W. C. Farabee, C. Peabody, and C. C. Willoughby.

Report of the Secretary.—The Secretary, Dr George Grant MacCurdy, reported that there had been no special meeting of the Association or of the Council since the close of the session in Boston, the proceedings of which had been published in the *American Anthropologist* for January-March, 1910.

As was the case in 1909, death has claimed but one of our members, William Graham Sumner, for many years Professor of Political and Social Science in Yale University. An account of Professor Sumner (with portrait) written by his colleague and successor at Yale, Professor Albert G. Keller, appeared in the *American Anthropologist* for January-March, 1910.

Thirteen of our members attended the Seventeenth International Congress of Americanists, held in the City of Mexico, September 8 to 14, 1910: W. Beer (Howard Memorial Library), F. Boas, R. B.

Dixon, P. E. Goddard, G. B. Gordon, S. Hagar, A. Hrdlička, G. G. MacCurdy, Z. Nuttall, H. J. Spinden, F. Starr, A. M. Tozzer, and H. N. Wardle.

The annual growth of the Association in membership has been substantial, 35 new names¹ being herewith submitted for election, as follows: Wm. F. Allen, Robert Ansley, Anthropology Club (Yale), Dr Felix Arnold, W. C. Barnard, M.D., Professor Hiram Bingham, Aberdeen Orlando Bowden, H. M. Braun, Joseph A. Breaux, Louis Bishop Capron, Dr Alfredo de Carvalho, Francis T. Hagadorn, Clarence Leonard Hay, William Frederick Howat, M.D., George Plummer Howe, Andrew Frederick Hunter, Mrs William James, A. V. Kidder, Frank Leverett, Mark Mason, Wm. Hubbs Mechling, Truman Michelson, Dr Max Radin, Mr David Robinson, Gerda Sebbelov, Grace Ellis Taft, James Teit, Julis César Tello, Thompson Van Hyning, J. Ogle Warfield, Gertrude Bass Warner, Thomas Talbot Waterman, Philip Welch, Henry M. Whelpley, M.D., Samuel B. Woodward.

Our membership is still numbered by hundreds when it should be numbered by thousands if the Association is to fulfil the function for which it was founded. How to reach those who are interested is a problem, the solution of which should not be left to the Secretary alone, or even to the officers. Every member should endeavor to furnish at least one new name annually. In October the Secretary sent a membership blank to each member asking for new names. Only three blanks have been returned. On December 16, he mailed a circular letter to 375 persons who are supposed to have a certain interest in anthropology. The results, though better than in the appeal to members, are coming in rather slowly. You are simply requested to suggest a name, leaving the Secretary to pursue the matter further by a personal letter. Let us all unite to double the membership during the coming year. The material for this increase undoubtedly exists. Help the Secretary to find it!

Report of the Treasurer.—The Treasurer's report, which was received² and referred to an auditing committee appointed by Vice-President Dixon, and found by them to be correct, is as follows:

¹ Full addresses are given in the list of members printed elsewhere in this issue.

² Read by Dr Charles Peabody in the absence of the Treasurer.

RECEIPTS

Balance from 1909.....	\$499.13
From Anthropological Society of Washington for <i>American Anthropologist</i> :	
Vol. XI, No. 3.....	\$68.74
Vol. XI, No. 4.....	76.61
Vol. XII, No. 1.....	62.16
Extra Copies to members.....	<u>30.48</u>
	237.99
American Ethnological Society for <i>American Anthropologist</i> :	
Vol. XI 3.....	58.55
Vol. XI 4.....	58.78
Vol. XII 1.....	58.43
Vol. XII 2.....	<u>58.43</u>
	234.19
Annual Dues.....	1,372.50
Annual Subscriptions to <i>American Anthropologist</i>	559.00
Sale of Back Numbers and extra copies of <i>American Anthropologist</i>	129.25
Authors' Reprints (at cost).....	316.24
Sale of Memoirs.....	26.86
American Folk-Lore Society Half cost Bibliography of Periodical Literature for <i>American Anthropologist</i> and <i>Journal of American Folk-Lore Society</i>	163.23
Half cost Periodical Literature.....	<u>178.41</u>
	341.64
Illustration.....	10.00
	<u>\$3,726.80</u>

EXPENDITURES

For Printing, Binding and Mailing <i>Anthropologist</i> ,	
Vol. XI, No. 3.....	\$441.44
Vol. XI, No. 4.....	693.78
Vol. XII, No. 1.....	281.63
Vol. XII, No. 2.....	<u>405.36</u>
	1,822.21
Reprints.....	<u>893.25</u>
	2,715.46
Illustrations for <i>American Anthropologist</i>	279.86
Editorial Expenses.....	150.00
Treasurer's Expenses.....	123.14
Secretary's Expenses.....	138.63
Returned subscription.....	<u>3.50</u>
	3,410.59
Balance.....	<u>316.21</u>

B. T. BABBITT HYDE,
Treasurer.

Found correct,
Robert H. Lowie,
Wm. C. Farabee,
Auditing Committee.

Providence, R. I., Dec. 28, 1910.

The amendments to the Constitution recommended at the Boston meeting by a committee consisting of F. W. Hodge, G. G. MacCurdy, and R. B. Dixon, were adopted. The Sections as amended are:

ARTICLE III.—MEMBERSHIP

Section 2. Persons interested in Anthropology may be elected on nomination of two members of the Association, and on payment of dues shall become members of the corporation, with full right of voting and holding office.

ARTICLE V.—OFFICERS

Section 1. The officers of the Association shall comprise a President, four Vice-Presidents, a Secretary, a Treasurer, an Editor, and a number of Councilors to be determined annually by the Association. These, with the ex-presidents, shall constitute a board of managers to be known as the Council.

Section 2. The President, Secretary, Treasurer, and Editor shall be elected annually to serve for one year, or until their successors are elected and installed. One Vice-President and one-fourth of the total number of Councilors shall be elected annually to serve for four years or until their successors are elected.

Section 3. The administration of the Association, including the filling of vacancies, the nomination of officers, and the arrangement of affiliations, shall be entrusted to the Council. Five shall constitute a quorum. The President, the Secretary, the Treasurer, the Editor, and three additional members of the Council to be designated by the Council, shall form an Executive Committee of the Council, which shall meet at the call of the President, and act in behalf of the Association, except during the meetings of the Association or of the Council, in all matters requiring attention.

Section 4. The President shall preside at the meetings of the Association, of the Council, and of the Executive Committee, or may delegate this duty; the President and Secretary shall sign all written contracts and obligations authorized by the Council.

Section 6. The Secretary shall record the proceedings of the Association and of the Council, conduct correspondence, make an annual report, and have general charge of executive matters under the direction of the President.

ARTICLE VI.—MEETINGS

Section 3. Notices of regular meetings shall be published at least two months in advance, and printed notices of meetings, with preliminary

programs of the scientific proceedings, shall be sent to all members at least a week in advance.

A communication from Professor Franz Boas to Mr Hodge, relative to the most economic way of publishing the bibliography of current literature for the benefit of members of the Association and of the American Folk-Lore Society, was read; also Mr. Hodge's letter of transmittal both of which are given here:

Columbia University,

New York City, Dec. 3, 1910.

MR. F. W. HODGE, Ethnologist in Charge, Bureau of American Ethnology, Washington, D. C.

My dear Mr. Hodge:—

During the past year we have issued the Bibliography of Current Literature jointly in the "Journal of American Folk-Lore" and in the "American Anthropologist." It seems to my mind that this is not yet the best way of solving our problem, and, since I am not able to attend the Christmas meeting, I wish you would kindly bring to the attention of the Council of the A.A.A. the question whether it would not be possible to issue the Bibliography and related matter as a separate publication, to be issued four times a year and to be furnished in one copy to each member of the Folk-Lore Society and of the A.A.A. I imagine we could finance this by appropriating from each Society a corresponding amount of money to the Bibliography.

Yours very sincerely,

FRANZ BOAS,

per A.

Bureau of American Ethnology,

Washington, D. C., Dec. 20, 1910.

Dear Professor Holmes:

I enclose a letter received from Dr. Boas just before his departure for Mexico, relative to the publication of the summary of periodical anthropological literature that has appeared in the American Anthropologist during seven years past. Dr. Boas' suggestion, if adopted by the American Anthropological Association and the American Folk-Lore Society, will result in economy of labor and avoid duplication, since under the present arrangement the bibliography appears in both the American Anthropologist and the Journal of American Folk-Lore. While I do not have the figures at hand, I believe the proposed quarterly journal of

periodical anthropological literature could be published by the two societies named without any additional expense on their part, and I should like to see the proposal adopted by the two societies. By issuing the proposed journal quarterly, it would have the advantage of second-class postage rate, i. e. one cent a pound.

Sincerely yours,

F. W. HODGE,
Editor.

Professor W. H. Holmes,
President of the American Anthropological Association,
Washington, D. C.

This matter was referred to a committee with power to act, consisting of F. Boas, F. W. Hodge, and Charles Peabody.

The following letter from Mr F. W. Hodge was read announcing his resignation as Editor, a position he had held for many years with so much benefit to the Association and credit to himself:

Bureau of American Ethnology,
Washington, D. C., Dec., 21, 1910.

Dear Professor Holmes:

I beg leave to present my resignation as Editor of the American Anthropological Association to take effect at the close of the present year. While I have long contemplated taking this step, owing to the pressure of other duties, I have hesitated to do so because of the feeling that I could render the Association and its official organ a service by retaining the editorship during the period when the publication was meeting its greatest obstacles, and because of the difficulty of finding some one willing to assume the responsibilities and the labor incident to the office. These difficulties have now been overcome through the loyal support of the officers and members of the Association and the valued aid rendered during the present year by Dr John R. Swanton, who has had entire charge of the editorial labors.

Yours very truly,

F. W. HODGE.

Professor W. H. Holmes,
President of the American Anthropological Association,
Washington, D. C.

The Chair appointed a committee to draft resolutions on Mr Hodge's resignation. This committee, consisting of Professor A. F. Chamberlain and Dr George Grant MacCurdy, reported as follows:

Report of Committee on Resignation of Editor

Dec. 30, 1910.

Resolved that the following minute be entered upon the records of the American Anthropological Association and that the Secretary be authorized to transmit a copy thereof to Mr Hodge.

The members of the Council of the American Anthropological Association desire to place upon record their deep sense and grateful appreciation of the valuable services of Mr F. W. Hodge as Editor of *The American Anthropologist* and other publications of the Association. They regret exceedingly his retirement, which is made necessary by the new and responsible office, Ethnologist-in-charge of the Bureau of American Ethnology, now demanding all his time and energies. They extend to him most heartily the greetings of the season and hope that many years may be granted him wherein to serve the cause of science with the same ability and faithfulness, which in years past have won for him the esteem and the gratitude of his colleagues and of all interested in the progress of anthropology in America.

(Signed) ALEXANDER F. CHAMBERLAIN,
GEORGE GRANT MACCURDY.

The Chair appointed Drs MacCurdy, Tozzer, and Lowie to be a Committee on Nominations. The report of this committee, which according to the provisions of the amendments to the Constitution materially increased (by eight) the number of the Council and included an Executive Committee, was accepted, the election resulting as follows:

President: Dr J. Walter Fewkes, Washington.

Vice-President, 1911: Miss Alice C. Fletcher, Washington.

Vice-President, 1912: Prof. R. B. Dixon, Cambridge.

Vice-President, 1913: Prof. Geo. B. Gordon, Philadelphia.

Vice-President, 1914: Dr Geo. A. Dorsey, Chicago.

Secretary: Dr George Grant MacCurdy, New Haven.

Treasurer: Mr B. T. B. Hyde, New York.

Editor: Dr John R. Swanton, Washington.

Executive Committee: The President, Secretary, Treasurer, Editor (*ex-officio*), and F. W. Hodge, Charles Peabody, and Pliny E. Goddard.

Council: W J McGee, F. W. Putnam, F. Boas, W. H. Holmes, J. W. Fewkes, Alice C. Fletcher, R. B. Dixon, G. B. Gordon, G. A. Dorsey, G. G. MacCurdy, B. T. B. Hyde, John R. Swanton (*ex-officio*);

E. L. Hewett, S. A. Barrett, W. Hough, A. Hrdlička, A. L. Kroeber, A. M. Tozzer, F. G. Speck, A. A. Goldenweiser (1911); H. I. Smith, G. H. Pepper, W. C. Farabee, F. W. Hodge, G. G. Heye, H. J. Spinden, T. T. Waterman (1912); W. C. Mills, H. Montgomery, C. B. Moore, W. K. Moorehead, C. Peabody, C. C. Willoughby, P. E. Goddard, T. Michelson (1913); A. F. Chamberlain, C. P. Bowditch, S. Culin, R. H. Lowie, C. Wissler, C. H. Hawes, E. Sapir, P. Radin (1914).

The sum of \$200 was appropriated for the editor, and at the editor's suggestion Dr Paul Radin was appointed Associate Editor.

The next annual meeting of the Association will be held in Washington, D. C., December 27-30, 1911, in affiliation with Section H of the American Association for the Advancement of Science.

The incoming President, Dr Fewkes, has appointed the following committees:

Committee on Meetings and Program: G. G. MacCurdy (chairman), W. H. Holmes, W J McGee, Miss Alice Fletcher, R. B. Dixon, A. M. Tozzer, F. W. Hodge, J. R. Swanton, A. Hrdlička, P. Radin.

Committee on Finance: B. T. B. Hyde (chairman), G. G. MacCurdy, W. H. Furniss, 3d, George G. Heye, Clarence B. Moore, C. P. Bowditch.

Committee on Publication: The names of the members of this committee appear on the third page of the cover of this number of the *American Anthropologist*.

Committee on Policy: Miss Alice Fletcher (chairman), W J McGee, F. W. Putnam, F. Boas, W. H. Holmes, A. L. Kroeber, G. B. Gordon.

Committee on American Archeological Nomenclature: C. Peabody (chairman), W. K. Moorehead, H. I. Smith, Walter Hough.

Committee on the Concordance of American Mythologies: F. Boas (chairman), J. R. Swanton, A. L. Kroeber, R. B. Dixon.

Committee on Nomenclature of Indian Linguistic Families North of Mexico: F. W. Hodge (chairman), F. Boas, A. L. Kroeber, R. B. Dixon, J. R. Swanton, J. Mooney, A. F. Chamberlain, E. Sapir.

Committee on the Preservation of American Antiquities: W. H. Holmes (chairman), E. L. Hewett (secretary), F. W. Putnam, J. Walter Fewkes, Alice C. Fletcher, F. W. Hodge, G. B. Gordon, G. G. MacCurdy, S. Culin, W. C. Mills.

ADDRESSES AND PAPERS

In the absence of President Henry M. Belden of the American Folk-Lore Society, his address was read by Dr Charles Peabody. Some of the most important papers read at the joint meeting are represented in this report by abstracts. These are:

Recent Progress in the Study of South American Indian Languages:

Prof. ALEXANDER F. CHAMBERLAIN

The author pointed out the regions of the South American continent in which, during the last five years, scientific research had been particularly active: the Colombia-Venezuela border-land, northwestern Brazil, Ecuador-Peru-Bolivia, southern Brazil, etc. Noteworthy are the investigations of Tavera-Acosta, Koch-Grünberg, Rivet, and Beuchat, Farabee, E. Nordenskiöld, von Ihering, et al. To Tavera-Acosta we owe rather extensive vocabularies of the Guahiban, Piaroan, Puinavian, Salivan, and Yaruran stocks, all of which hitherto have been rather scantily represented by linguistic material. Koch-Grünberg, as a result of his sojourns in northwestern Brazil, has shown the Makuan to be an independent stock, and added much to the linguistic material in print and in Mss. concerning the Arawakan, Cariban, Betoyan, Miranhan, and Uitotan stocks. Rivet and Beuchat, studying the extensive linguistic material obtained by the former of these authors (they are now working jointly), have thrown much light on the ethnologic problems of the Ecuador-Peruvian border-land, delimiting the areas of the Jivaran (Rivet has shown Brinton's "Jivaro" to be really Jebero and, therefore, Laman, or, as he terms this stock, Cahuapana), Zaparan, Laman (Cahuapana), etc. Rivet believes that the Jivaran has marked Arawakan affinities, and his later studies claim to attach some of the minor stocks of southern Colombia to the Chibchan. Dr Farabee's investigations have resulted in the accumulation of much lexical and grammatical material concerning the Arawakan peoples of Peru; also vocabularies, etc., from tribes of Pancan, Uitotan, Jivaran and other stocks. The thorough study of this valuable material will add not a little to our knowledge of the linguistics of the Peruvian area. E. Nordenskiöld has devoted

some attention to the little-known tribes of eastern Bolivia and we may expect other data of value from him in the near future. To von Ihering belongs the credit of having first established beyond a doubt the independent character of the Chavantean stock. Here should be mentioned also the researches of Barrett recently initiated into the language of the Cayapa, etc., of the Barbacoan stock. Of works of a more or less bibliographical character the most important are Lenz's monograph on the Indian elements in Chilean Spanish, Schuller's contributions to Araucanian bibliography, etc., and Mitre's *Catalogo*, with its introduction by Torres.

Recent Literature on the South American "Amazons": Prof. ALEXANDER F. CHAMBERLAIN

The author résuméd and discussed the monographs of Lasch, Friederici, and Rothery, all published during the year 1910. Of these the study of Friederici seems the most satisfactory; the book of Rothery, however, is the most ambitious, treating of the ancient and modern Amazons all over the globe. Mr Friederici rejects the view of Ehrenreich and Lasch of a unitary origin of the Amazon legends among the northern Caribs, with extension thence over all northern South America. Both in content and origin the Amazon legends differ notably from each other in several cases, and they are of multiple provenance. In some there is evidence of modification and contamination through European sources. Among the causes of the origins of South American "Amazon" legends he enumerates the following:

1. The notably warlike character of women in many primitive American communities.
2. The peculiar power or influential position of women (due to economic, religious, hereditary, or other social reasons) in a few tribes, which made a great impression upon the mass of the surrounding communities.
3. Rumors of the barbaric splendors of the Empire of the Incas, which had penetrated the wilderness to the East.
4. Reports of certain unusual sexual relations of Indian women, etc.

5. Tales of "Amazons" due to native reports misunderstood by the Spaniards, or from such tales purposely spread by the latter.

Amazon legends are reported from the West Indies (Ramon Pane records a characteristic one), from Yucatan, and from Mexico. The Mexican legends, Mr Friederici thinks, are "the least founded of all, ethnologically or mythologically" (p. 23). Ill-founded likewise are the legends from California and the northwest Pacific coast. Incidentally, Friederici points out that the account attributed generally to Orellana, belongs really to Carvajal, and that the "river of the Amazons" received its name from the valor of the Indian women met with by the Spanish explorers.

The Age-Societies of the Plains Indians: Dr R. H. LOWIE

Age-societies have been ascribed by ethnologists to a large number of Plains tribes. A sharp definition of the age-factor results in limiting the number to the Blackfoot, Village tribes, Arapaho, and Gros Ventre (Atsina). The question arises whether in these cases the age-factor is a basic or derivative feature. Investigation proves that the age-element is a subordinate feature, the collective purchase of ceremonial regalia, songs, and dances being apparently the dominant motive.

Some Aspects of New Jersey Archeology: Dr CHARLES PEABODY

Slides were shown illustrating the three celebrated strata at Trenton, New Jersey, on the glacial terrace above the Delaware River, viz.; the black soil, the yellow loam, probably of immediate post-glacial deposition, and the true "Trenton" gravels underlying the yellow soil.

Attention was called to certain discoveries made during the season's work of 1910 by Mr Ernest Volk, who has spent large portions of the last twenty-two years in exploration and observation of the region.

(1) The Bison Bone:

On June 22, 1910, in the sand pit of Mr Ahrendt on the terrace was found an artificial pit; the cross section was: at the top six inches of black soil, under this one foot of yellow loam, and under this a red clay band one inch thick.

In the pit were found the femur of a bison and accompanying it fine particles of charcoal. In the red band on one side of the pit lay a chipped water-worn pebble of argillite, and in the same red band to the left, a water-worn pebble of argillite, not chipped.

(2) The Artificial Pit:

On August 23, 1910, in the sand pit of Mr Ahrendt, on the terrace was found another artificial pit; the cross section: at the top, six inches of black soil, under this yellow loam (with thin red bands) three feet six inches thick; and under this, overlying the pit, three or four inches of brown sand and charcoal. Nothing but charcoal of human provenance was found in the pit.

(3) The Natural Pit:

In the same sand pit seven feet down under a somewhat similar series of natural strata, was a pit made by ice, probably, or by some other natural agency. The importance of commenting on these three pits together consists in drawing attention to the similarity of geological and climatological conditions under which the pits were formed. Light is shed on the question of the contemporaneity of man with the post-glacial conditions which permitted the deposition of the yellow drift and the formation of the series of so-called "ice-pits"; the bison is added to the list of animals which lived as contemporaries with man at this epoch. A photograph taken by Mr Volk was shown giving the negative in yellow loam of a large boulder which had fallen out; the similarity of forces which were sufficient to transport such boulders during the formation of the yellow drift with those forces undoubtedly of glacial origin that deposited great boulders in the gravels lower down was insisted upon. Reference was made to the continuity, accuracy, and fidelity of Mr Volk's work.

*The Historical Value of the Books of Chilán Balam:*¹ Mr SYLVANUS
GRISWOLD MORLEY

The recovery of aboriginal history in America is exceedingly difficult because of the absence of original sources from which it

¹ Published in full in *Am. Jour. of Archæol.*, 2d series, xv, 195, 1911.

may be constructed. To this general condition, however, the Maya of Yucatan offer a striking exception. Centuries before the Spanish conquest this intelligent people had developed an accurate chronology and a system of hieroglyphic writing by means of which they recorded their annals.

These aboriginal records were destroyed at the time of the Spanish conquest; but in the century that followed, 1550-1650, there grew up a body of native writings called "The Books of Chilan Balam" in which were embodied much of the aboriginal history of this country. The case for and against these chronicles as reliable sources for the reconstruction of Maya history may be summed up as follows:

A. Unfavorable

1. Breaks in the sequence of the katuns, the unit of enumeration used in the chronicles for counting time.
2. Certain disagreements, usually of time, in the statement of facts.

B. Favorable

1. Very general agreement throughout.
2. Early date at which the chronicles were compiled, 1550-1650, when the ancient history had not yet been forgotten.
3. Authorship by natives, many of whom had grown to manhood before the Spanish conquest, and who had had therefore opportunities for learning their ancient history at first hand, before European invasion and acculturation.
4. Many corroboratory passages in the early Spanish writers.

There are two important conditions however, which will explain, in part at least, the discrepancies in the chronicles which have been noted above under A.

1. The original manuscripts have never been studied and compared, and the present translation was made from hand copies only, a condition pregnant with possibilities for error.

2. The translation itself is not always accurate and indeed in several instances has been shown to be misleading and incorrect.

Recent Archeological Investigations in Northern Guatemala: Dr ALFRED M. TOZZER

The area occupied by the remains of the Maya civilization may be roughly divided into various provinces distinguished from each other by chronological considerations as well as by those dealing with assemblage, construction, the manner and method of decoration, and others.

The area treated in detail is that which includes the north-eastern part of the Department of Peten, Guatemala. Tikal is the first city of importance in this region. To the east is Nakum, first made known to the scientific world by Count de Périgny in 1908, and Naranjo explored by Mr Maler. In addition to these ancient sites the Peabody Museum Expedition of 1909-1910 reports the new ruins to the north of Naranjo and Nakum of La Honradez, Porvenir, Azucar, Seibal 2nd, and Holmul in Guatemala, and those of Tšotsikitam in British Honduras.

These ruins are all characterized by the presence of one large court or plaza around which in most cases the greater number of stelæ and altars are placed. The plan in each case shows a system of oriented courts all connected with one another with very few detached buildings.

From a study of the dates now available it will be seen that this region occupies the first position in point of time in all the ruins of the Maya area. It is not possible to show at the present stage of the study of the archeology of this section that the Tikal territory was the center from which spread the influence responsible for the cultures of Copan and Palenque. From the evidently related character of certain of the stelæ at Tikal, it may be reasoned that not only was this region a center which began very early in the life of the Maya civilization but that it continued to hold its important position until well toward the end of the time when the southern Maya culture resigned its place of preëminence to that part of the Maya people living far to the northward.

The results of the investigations of the Peabody Museum Expedition of 1909-1910 will appear in the *Memoirs* of the Museum.

Cretan Anthropometry: Prof. CHARLES H. HAWES

Since Professor Boyd Dawkins and Dr Duckworth concluded that the ancient Cretans belonged to the long-headed, dark, short Mediterranean race, the examination of additional ancient skulls and measurements of living Cretans made by Professor Hawes have gone far to confirm this conclusion, and to show that the *average* modern Cretan is a modification of this type and has a broader head than his ancestor.

Nevertheless the facts here set forth demonstrate that the ancient Cretans or Minoans with their characteristic long head are still represented in the more inaccessible regions, and that the broadening element is due to the presence of brachycephals who are mainly confined to the plains and coasts. Further the facts are interpreted to indicate that the broad heads are descendants of aliens, and in the main traceable to *prehistoric* immigrants.

The data for Minoan skulls is obtained from 118 crania, of which Dr Hawes used 78 male skulls (c. 2000 B.C.), leaving out those of the late Minoan period during which there is both archeological and anthropological evidence of an alien immigration. These 78 skulls yield an average cranial index of 74.0, and the long heads are to the broad heads as 5 to 1.

The data for modern Cretans is large, amounting to over 60,000 measurements and observations, and for this reason comparisons are at present confined to the cephalic index. Adding 199 Cretans measured by Dr Duckworth to those measured in Dr Hawes' expeditions of 1905 and 1909, we have a total of 3,183. But from these have been deducted foreigners, women, and children and even Mussulman Cretans, leaving 2,290 modern Cretans as the basis for the following comparisons. These yield an average cephalic index of 79.0 to be compared with 76.0 (i. e., 74.0, the cranial index, plus 2.0, allowance for the cephalic). The average modern Cretan is therefore mesaticephalic, midway between his ancestor, the ancient Cretan, and his neighbor, the modern Greek (c. 82.3); and the long

heads are to the broad heads in the proportion of 5 to 4. The difference is appreciable and impels us to ask, do the descendants of the ancient Cretans, with a cephalic index of 76.0, exist in Crete today? If so, it is reasonable to suppose that the invading aliens have driven the natives up into the hills, and there we find them. Present in the plains, they predominate in the mountains. In the mountain plain of Lasithi (2,700 ft.) the average cephalic index is 76.5 with a proportion of 9 dolichocephals to 1 brachycephal. On the northern slopes of Mount Ida the cephalic index is 76.5. On the northern slopes of the White Mountains, in the west, in one village, 65 men averaged 76.9 compared with 79.9 in the plains immediately below. In the Messara Mountains of the center, the average was 76.9 in contrast to 80.9 in the plains. Twenty-eight skulls of revolutionists of 1821 and 1866 chosen at random from the mausoleum of a mountain monastery, yielded a *cranial* index of 74.2 and a ratio of $4\frac{2}{3}$ long-heads to 1 broad-head. In the less accessible mountain regions are thus to be found modern Cretans of similar cephalic index and ratio of dolichocephals to brachycephals to those of Minoan Crete.

How then has the *average* cephalic index risen in 4,000 years from 76 to 79? The author has already suggested that this change is due to the presence of the descendants of prehistoric immigrants. Reviewing historic invasions, it is possible to dispense with Turkish and Venetian somatological influence. Mussulmans have been rigidly excluded from these records and the Venetians, he has shown by a careful comparison of the Venetian-named Cretans with the rest, possess exactly the same average cephalic index, thus evincing a breeding-out in the course of nine generations of the infusion of Venetian blood that Crete received. This leaves us with the prehistoric invasions of the Achaeans and the Dorians, which tradition, history, and archeology attest. Anthropometry witnesses to an invasion of broad heads in the Third Late Minoan period (1,450-1,200 B.C.). It is to the Dorian inroad, a migration of a people, rather than to the freebooting Achaeans, that Hawes attributes the chief part in the broadening of the Cretan head. This is best illustrated in the southwest corner of Crete in the eparchies of Sphakia

and Selinon. The Sphakiots are by tradition and dialect Dorians, and seem to have maintained the purity of their blood by resisting all invaders and by the custom of endogamy. They and their neighbors have average cephalic indices of 80.4 and 80.9 and the broad heads are in the majority as 3 to 2 and 3 to 1. If we assume, as many scholars do, that the Dorians ultimately came from Illyria we have an explanation to hand. The Illyric stock is unmistakable and exceptional in Europe to-day, in that it combines a broad head with a tall frame. In this southwest corner of Crete is a broad-headed people with a stature of 1709 mm. (cf. Dalmatians 1711 mm.) whereas the central and western Cretans average 40 mm. less.

A further test made with an instrument invented by Hawes, the comparison of the sagittal curve of the living head, brings out a striking likeness between brachycephalic Sphakiots, the Albanians (the oldest inhabitants of Illyria) and the Tsakonians, a tribe in the east of the Peloponnesus, 8,000 in number, who still speak a Dorian dialect unintelligible to the Greeks. These three peoples, all with claims to Dorian descent, separated by hundreds of miles, yield exactly similar sagittal curves and their *normal* types very closely approximate, whereas the contrast to that of the Mediterranean race is extraordinary.

The Social Organization of the Winnebago Indians: Dr PAUL RADIN

The topics discussed by Dr Radin included:

1. The village organization.
2. The phratries.
3. The clans (animal names, animal descent, exogamy, friendship groups, clan legends, clan names).
4. The ceremonials associated with the clans.
5. The clan function (clan feasts, clan wakes).
6. Marriage.
7. Death and mortuary customs.
8. The hunt.
9. The warpath.

Dr Radin closed with a general theoretical discussion of the phratries and clans.

The Religious Ideas of the Winnebago Indians: Dr PAUL RADIN

This subject was also treated topically:

1. The guardian spirits associated with the ceremonial societies and with the clans.
2. Their "nature" (nature deities and "spirit" animals) and the specific powers they control.
3. The "inheritance" of guardian spirits *per se*, and in association with the clan and the ceremonial organization.
4. The "degrees" in the attitude toward guardian spirits.
5. The conception of life, death, future life, and transmigration; its bearing on the social organization.
6. The ceremonials associated with the attainment of long life, with death, future life, transmigration, and miscellaneous religious beliefs.
7. The guardian spirits as the basis of the ceremonial organizations and the influence of their disappearance on the types of ceremonial organizations.
8. The impossibility of separating the social and religious factors in their attitude toward the guardian spirits and the general conceptions.
9. Discussion as to the probable historical development of the religious-social complex.

Polynesian Gods: Prof. ROLAND B. DIXON

The characteristics of the four great gods of Polynesia were discussed, and the relative importance of these deities in the different island groups pointed out. Kane, Ku, and Lono were suggested as forming a connected group, with Kanaloa quite separate and differing in origin. It was suggested that the latter might probably be derived from a Melanesian deity, whereas the triad showed indications of an origin in Indonesia.

Polynesian and Melanesian Mythology: Prof. ROLAND B. DIXON

The myth incidents of the Polynesian and Melanesian areas were considered in their distribution, and in their relation to the mythology of Micronesia and Malaysia. The general results of this comparison seemed to accord with the theories of migration and cultural origins derived from a study of material culture.

A Pre-Pajaritan Culture in the Rio Grande Drainage: Dr EDGAR L. HEWETT

On the high bench lands bordering the Chama River on the south, Dr Hewett recorded in the summer of 1905 a large number of ruins of a different character from any of the well known ancient Pueblo ruins of Pajarito plateau. During the past summer, many more of the same character were noted and surveyed in the Ojo Caliente Valley. These ruins consist of foundations of cobble stone inclosing rectangular rooms. Some of the ruin groups are of great extent. A typical group consists of a central circular structure of stone, probably in part subterranean, an open plaza surrounding it, then the foundation walls extending out in all directions. The entire settlement is divided into two parts by a narrow irregular street. That these ruins antedate the great community houses of the Pajaritan culture is shown by the facts that the walls are reduced to the grass level and that these ruins in some cases partly underlie the structures of the latter period.

Abstracts were furnished by some authors who were not able to be present and read their papers. These abstracts are also given:

A Note on the Persistence of Some Mediterranean Types: Miss GEORGIANA G. KING

"In Italy and Spain one meets the local frescoes and portraits at times in the streets. I am told that Leonardos and Luinis abound in the Milanese, and a friend of mine has seen a mother and three daughters, conspicuously Etruscan, in Massa Marittima. For myself I have seen the following and can show photographs for the elder part (I have no modern photographs):

In Siena, children like Matteo di Giovanni's.

In Viterbo, a woman like the "Roman School."

In the Emilia, women like Mantegna's and the local school.

In Arles, women like the Roman Sarcophagi.

In Venice, ecclesiastics like Gentile Bellini's; women like Carpaccio's.

In Spain, women like the Lady of Elche.

"These last are alike in the matter of figure and carriage and expression, as well as feature."

The Double Curve Motive in Eastern Algonkian Art: DR FRANK G.
SPECK

This paper presents a brief preliminary report of investigations in decorative art being carried on among the tribes of the north-eastern Algonkian group, including the Abenaki, Penobscot, Passamaquoddy, Malisit, Micmac, Montagnais, and Naskapi. The predominant design unit is a figure described for convenience as the "double curve," two opposing incurves. Variations of this elementary figure occur, throughout the region discussed, so universally that the double curve motive is really characteristic. While it is also seen occasionally in Iroquois and Ojibway art, it is none the less distinctive of the northeastern Algonkians. Formerly the designs were produced in the moose hair and porcupine quill techniques, and by painting. Nowadays most of the examples are seen in beadwork, except among the Naskapi where painted decorations still occur. In wood carving and etching on birch bark the more southerly tribes still preserve the old type of decoration.

The main body of material discussed in the paper is based upon collections made among the Penobscot, who are being made the subject of an independent monograph by the writer. Some forty typical forms of the double curve design, showing different degrees of elaboration, are used. The simplest is the bare double curve, the modifications ranging up through highly complex examples with a score or so of compounded ornaments filling up the interior. In the more modified examples the original double curve unit is sometimes hardly distinguishable on account of the numerous embellishments. Aside from simple ornament not any particular symbolism has so far been found that would apply to the whole region. Investigations in the field of symbolism have produced satisfactory results only among the Penobscot, where the designs seem to have originally been floral representations with a magical medicinal value through the association of the design with the herbal remedies which play so important a part in the life of these Indians. Judging however from the lack of such an interpretation among the Malisit, so far as has been discovered, it would seem, at present, as though the matter would have to be investigated along independent lines in each particular tribal area.

Materia Medica of the Algonkian Indians of Virginia: Mr J. OGLE WARFIELD

This paper treats first of the subject as recorded by the early authorities. This is far from being full and concise and yet is of value even for the little information it contains. Second, the remnants of these tribes now remaining, having been so closely kept in contact with the English settlers and their descendants for the past three hundred years, have lost all ceremonial functions and ideas connected therewith; and have even lost the limiting of such practice to any particular person or coterie of such persons. That which they use is chiefly in the form of decoctions or "teas" made of barks and roots, which are gathered and made by the mother or grandmother of the family; outward applications are also used. Quite a number of such remedies were obtained. They are not simply recollections of the past but are used and believed in firmly.

In the absence of Professor Hiram Bingham, his paper on "The Ruins of Choquequirau" was read by Mr George P. Winship. It has been published in the *American Anthropologist*,¹ as has that of Prof. Chamberlain² on "The Uru: A New South American Linguistic Stock." Dr Edward Sapir's two papers, "The Linguistic Relationship of Kwakiutl and Nootka" and "The Nootka Wolf Ritual," are printed in full on pages 15-28 of the present issue, and a paper by Mr Stansbury Hagar (read by title) on "The Four Seasons of the Mexican Ritual of Infancy" will appear in a later number.

The papers read of which the Secretary was unable to obtain abstracts were:

Measurements in 1910 in the Spiral Stairway of the Leaning Tower of Pisa. By Professor WM. H. GOODYEAR.

Philistine and Hebrew in Palestine. By DR ELIHU GRANT.

The Survivals of Germanic Heathendom in Pennsylvania German Superstitions. By Professor E. M. FOGEL.

Fire and Fairies with Reference to Chrétien's Yvain, vv. 4385-4575. By Professor ARTHUR C. L. BROWN.

A Garland of Ballads. By Mr PHILLIPS BARRY.

¹ Vol. 12, no. 4, Oct.-Dec., 1910, pp. 505-525.

² Ibid., no. 3, pp. 417-424.

The following papers were read by title:

The Place of the Esthetic in Human Welfare. By Professor WILLIAM H. HOLMES.

Tewa Ethnozoölogy. By Professor JUNIUS HENDERSON.

Tewa Ethnobotany. By Mr W. W. ROBBINS.

Notes on Tewa Medical Practice. By Miss BARBARA FREIRE-MARRECO.

The Mesquite and its Uses. By Mr JOHN P. HARRINGTON.

The Dog in Pueblo, Mexican, and Peruvian Mortuary Customs. By Dr WALTER HOUGH.

The Cradle-board in Ancient Mexico. By Miss H. NEWELL WARDLE.

At one o'clock on Wednesday the 28th, the Corporation of Brown University gave a luncheon in the Administration Building President Faunce receiving. The afternoon of the same day was devoted to sight-seeing; visits were made to the John Hay Memorial Library, the John Carter Brown Library, the Annmary Brown Memorial, and the Rhode Island School of Design, followed by a reception at the Providence Art Club.

YALE UNIVERSITY,
NEW HAVEN, CONN.

BOOK REVIEWS

Les Fonctions Mentales dans les Sociétés Inférieures. By L. LÉVY-BRUHL. Paris: Félix Alcan, 1910. 8°, pp. 455.

In the introduction, the author takes issue with writers of the English school, Tylor, Frazer, Lang, who postulate a psychic unity of mankind, and are thus led to elevate the doctrine of animism to the rank of a general principle of interpretation of primitive beliefs. The account these authors give of the origin of savage beliefs, argues Bruhl, is too individualistic and rational. They abstract the savage from his social environment and make him ask questions such as why? or how? which he then answers in conformity with his undeveloped psychology which, however, is governed by laws essentially similar to those of our own psychology. The emotional and volitional elements of the processes involved are unduly neglected. Moreover, the complexity of the mental make-up of the primitive man is distinctly underrated. What in Bruhl's opinion is the fundamental question these writers do not ask at all, viz.: Are the mental processes of the savage strictly comparable to our own? This question Bruhl does not hesitate to answer in the negative. Human mentality is in the main a social, a collective product. The social environment of the savage differs from that of the civilized man, hence, his mentality must be different. The author proposes to investigate some types of primitive collective mentality in order to ascertain its dominant characteristics.

The first part of the work deals with *the collective "representations"*¹ *in the perceptions of primitive peoples, and their mystic character.* The psychic processes of the primitive are relatively undifferentiated; hence the complexity of these processes, for motor and emotional elements form an integral part of them.

An object used in a religious ceremony, e. g., becomes saturated with religious or magical associations, and they henceforth become part of the essence of that object no matter in what context it may appear. This holds true of all living beings, objects, natural phenomena, which enter into primitive collective "representations." Hence, the entire material world throws a peculiar picture on the psychic screen of the primitive man, a picture which

¹ The author uses the term "representations" in the sense of *Vorstellungen*. "Concepts" would not cover the meaning, nor would "perceptions." Hence I prefer to use Bruhl's term "representations."

to us appears as unreal, as mystical. For want of a better term the author uses the word *mystical* to designate that general trait of primitive mentality.

The question, how does the savage explain to himself a given natural phenomenon, can never arise if we eliminate from the outset the wrong postulate that he perceives phenomena as we do. The savage does not seek for an explanation of his perceptions for it is implied in the mystic elements of his collective "representations" (p. 39).

As animate objects share their mystic properties with inanimate objects, the distinction between the two sets of phenomena becomes of slight importance, and is, in fact, often neglected. The close associations of object and image, or of name and thing named, which are familiar to all students of primitive man, must be accounted for along the same line of common mystic properties. Similar connections exist between object and shadow, or dream and real life. Here the author justly emphasizes the fact that savages do not, as is often assumed, confuse dreams with reality. On the other hand, however, dreams for them are as real as life, and dream visions are even a privileged class of experiences for they are particularly rich of mystic content. The same is true of the visions and hallucinations of inspired individuals. Those objective properties of objects which we use as guides for recognition and classification are of relatively slight importance to the savage. Objective experiences are only in part responsible for his beliefs, nor are they able to disillusion him when it comes to a sudden clash between faith and reality, for any discrepancy is easily explained away along the line of some familiar mystic association.

In vain should we search for the fundamental principle of primitive mentality in the precepts of our logic, or of any logic. Such a fundamental principle the author finds in the *law of participation*. The bond between the Central Australian native and his *churinga*, that between a clansman and his totem, or that between an individual animal and the species, may serve as illustrations of the concept of participation. The connection assumed is in all cases of a mystic character. Influence by contact, by transfer of power, by sympathy, by action, directly or at a distance, are other instances of mystic *rapprochment*. The principle of participation conflicts with our logic in so far as it is relatively indifferent to the law of contradiction. The one may yet be the many, the visible existence of an object does not exclude its invisible existence, a Bororo may also be an *arara*, a deer may be identical with corn and with a feather, etc. Bruhl is thus led to characterize this stage of mystic mentality as *prelogical*.

Here the author comes out with a forcible critique of Tylor's doctrine of the soul as a double. He shows that the belief commonly held by primitive

peoples is not in one double but in a multiplicity of souls which often are in a mystic *rapport* with each other, but coexist and do not merge into one individuality. The concept of a single soul belongs to a later stage in mental development (pp. 92-93). Bruhl would like to see the term "animism" eliminated from discussions of primitive mentality, in favor perhaps of the term "dynamism," a sort of continuum of mystic spiritual forces, an *Illbeseelung*. If we add that these mystic forces are supposed to be latent rather than constantly active (p. 145), the term *dynamism* appears to stand for what has variously been designated as *wakan*, *orenda*, *fadi*, etc. It certainly belongs to the class of concepts covered by Marett's tabou-mana formula.

Passing now to the operation of primitive mentality Bruhl finds that its relative exemption from the laws of logic is reflected in its being non-analytical. "Des préperceptions, des préconceptions, des préliations, on pourrait presque dire des préraisonnements," such are the determining elements of its functions. The question arises: How is it that primitive mentality, although relatively free from the regulative precepts of logic, is yet so markedly fixed and definite? The answer is found in the uniformity of the social structure to which the mentality of any given group corresponds (p. 115).

The author now passes to more specific characterizations. Memory must needs play a dominant role in primitive life. While the contents of our minds consist mainly of a small number of concepts classificatory of experience, the mind of the primitive man is crammed with a host of complex and heterogeneous memory-images which do not lend themselves to any logical sifting or rearrangement. Bruhl cites in confirmation of his proposition the great richness of vocabularies and the grammatical complexity of primitive languages (p. 123). The remarkable versatility and exactness of memory among savages is illustrated by a number of ethnographic examples (pp. 117-122). Abstraction, generalization, classification, are not indeed foreign to primitive mentality, but the features of experience which form the new material of those higher processes are not the objective features which lie at the root of the corresponding processes of our own mentality. Thus the mere resemblance of an image to an object leaves the primitive mind almost indifferent, but no sooner does there arise a complex of mystic associations than a bond is established between the two phenomena and they are united in an abstract concept of a mystic character (pp. 126-7). We shall return further on to some other features of this section of the work.

In Part II Bruhl sets out to test the propositions enunciated in the preceding sections, at the hand of primitive languages and systems of numera-

tion. Strangely enough the author excludes from his survey an examination of grammar, restricting himself to vocabularies and syntax. The common occurrence of multiple plurals in primitive languages indicates that the tendency is rather to express specific types of plurality than the idea of plurality as such. Noting the prevalence in many primitive languages of local adverbs, of suffixes and prefixes indicating exact position in space, etc., the author feels justified in declaring that the categories of position, and of distance, in space, are as important elements in the "representations" of primitive peoples as the categories of time and causality are with us (p. 165). This applies also to the many devices employed in these languages to designate the detailed form of objects, their size, manner of motion, etc. (p. 167). Bruhl analyzes gesture language and draws a close parallel between the categories therein expressed and those of primitive languages, particularly those devices for the designation of color, volume, degree, pain, satisfaction, which the author describes as "vocal gestures," *Lautbilder* (p. 183). Thus Bruhl arrives at the idea of "concept-images" which, in his opinion, dominate primitive mentality (p. 190). Bruhl warns against the inference that the particularization of terms and the tendency towards precise expression of minute details, which are characteristic of primitive languages, were due to any conscious effort of attention. The real cause of this phenomenon lies in the fact that "image concepts" required either manual or oral gestures in order to be expressed in language (p. 197). The mystic character of words as such, and the part they play in primitive practices, are briefly commented upon (pp. 199-203).

In dealing with systems of numeration Bruhl draws attention to the common but erroneous opinion that the limitation of separate words for numbers to three or four indicates an inability to conceive pluralities of a higher order. Numerous experiences with primitive peoples show that the savage may and does have a very precise idea of the number of animals or objects with which he is concerned, although he may not be able to count beyond three. But here again the concept of number is not differentiated from the things counted (pp. 205-6). The same is true of those numerous cases where parts of the body are used for counting (pp. 210-219). In the instance of the Tsimshian who have seven sets of numbers used in counting seven categories of objects the author sees a confirmation of the point made about multiple plurals. As plurality there, so number here, is expressed not abstractly but in relation to the specific objects concerned (pp. 222 *et seq.*). Mystic numbers are discussed at some length (pp. 235-257).

Part III (pp. 261-421) is devoted to a detailed description and analysis of those practices of primitive peoples in which collective representations

are particularly prominent. The author passes in review the magic ceremonies performed before, during, or after the chase or fishing expedition. War-ceremonies; the *intichiuma* performances, the practice of couvade; the beliefs and customs connected with sickness, death, divination, magic, initiation, are in turn described and analyzed. The illustrations are taken from tribes well known to ethnologists and need not detain us.

Part IV is short and may perhaps be regarded as an outline of a work yet to come. Here the author tries to bridge the gap between primitive and civilized mentality, by indicating in most general terms the processes of differentiation and analysis by which the mental complexes of primitive man are transformed into our concepts.

When the author draws a sharp line between the mental processes of the primitive man and those of the civilized, he seems at first to be on the right track. When he emphasizes that the interpretations of the differences disclosed must lie mainly along the line of the influence of collective mentality upon the mind of the individual, we are still ready to follow him. But the author goes further. He asserts that the entire mental picture of the material world is different in the primitive and the civilized. "Primitive man," says Bruhl, "does not perceive anything as we do. As the social *milieu* in which he lives differs from ours, and precisely because it so differs, the external world he perceives differs also from that perceived by us. True enough, he has the same senses as we have . . . and the same cerebral structure. But we must remember that collective 'representations' enter into each one of his perceptions. No matter what object presents itself to him, it is always indissolubly connected with certain mystic properties, and when the primitive man perceives the object he does not, in fact, separate it from these mystic properties" (p. 37). At another place we read: "For primitive peoples reality itself is mystical. No being, object, or natural phenomenon appears in their collective 'representations' as it does to us. Almost all we see in these phenomena, escapes them or is indifferent to them. And again, they read into the phenomena much that is quite foreign to us" (p. 31). Similarly on p. 76: "All reality is mystical as is all action and consequently also all perception." Here Bruhl goes decidedly too far. True, mystic associations hold the mentality of the savage in their grip and there is scarcely an action, an object, or an event, that *may* not become replete with magic content. We may even admit that those objects or activities which are most intimately associated with sacred ceremonies or social functions become so thoroughly imbued with the atmosphere of these significant occasions that they can never appear to the savage in their objectivity. But from such facts there is a far cry to the assertion that mystic associations

are in primitive society all-pervading, that they transform the face of the material world. The savage decorates his house with symbolic figures, he uses magic devices to insure the success of the chase, he fights his foe with arrows as well as incantations, he does on certain occasions regard himself or his clansmen as animals, etc. But to all this there is another side. The ingenuity in design and the skill in execution displayed in the wooden house of British Columbia, or in the snow-dwelling of the Eskimo, are not bred of the magic significance of these habitations or of the parts that go to their making. The nets, traps, snares, used by the Kwakiutl to catch or entrap the game he feeds on, bear evidence to other than mystical tendencies in the minds of their inventors. When an enemy falls in the heat of battle, the savage may ascribe it to the assistance of spirits as much as or more than to the action of his arrows; but when he chisels the stone or bone point and carefully dips it into the deadly liquid we may well believe that the principle of causality is not dormant in his mind. The same applies to the savage's conception of space, no matter how often particular positions or directions may acquire magical significance (pp. 129-130), and to the words of his language, no matter how commonly they may resound with magic ring in divination, cure, or incantation (pp. 199-203). If our censure of Bruhl's argument is correct, some of the specific applications of his doctrine must also be taken exception to. Bruhl assumes that the savage does not distinguish an object from its picture or reflection because traditional collective "representations" introduce the same mystic elements into both perceptions (p. 44). And again in regard to the names of objects: "The name is mystical, as the image is mystical, because the perception of the object . . . is mystical" (p. 49). The shadow is similarly dealt with: "It is confused with the body because the perception of the shadow, like that of the body itself, its image or its name, is a mystic perception, of which the shadow as such . . . constitutes but one element among many" (p. 51).

As special instances of the author's theory these interpretations are consistent enough, but they do not flow naturally from an objective survey of the facts. It would indeed be remarkable if the savage were not struck by the purely objective resemblance in outline and manner of motion between an object or body and its reflection or shadow. The analogy of children and animals is here quite legitimate. When we remember the universal tendency of primitive man to read forms of animals or objects into rocks or clouds of but dimly suggestive configuration—and here surely naught but objective resemblance could determine the "mythological apperception"!—it seems inconceivable that the infinitely more deceitful forms of the image and shadow should not have become united with the body or object by a

psychic bond of great stability. If so much be granted, we need not look further for the primary psychic cause of the ensuing confusions. As to specific developments, mystic associations must of course be recognized as eminently fitted to enhance these as many other distortions of reality.

There remains another and more fundamental point in which the author's position does not seem to me to be tenable. On p. 30 we read: "The collective representations of primitive men differ fundamentally from our ideas or concepts; nor are they their equivalents." "We are led to think," says Bruhl, "that primitive mentality does not obey exclusively the laws of our logic, nor laws that are of purely logical character" (p. 70). It is *pre-logical*. It is not like our own thinking, governed by the law of contradiction (p. 79). Primitive mentality is thus constituted because it is dominated by collective "representations" which impose themselves upon the mental life of the individual (p. 16). The author is not indeed blind to the collective character of much in our own mentality. "In these societies of primitive groups," says he, "as much or even more than among ourselves, the entire mental life of the individual is profoundly socialized" (p. 112). Nor is the occasional logical character of individual thinking entirely overlooked. "As an individual, and in so far as he thinks and acts independently, if that be possible, of these collective 'representations,' the primitive man will generally feel, judge, and behave in conformity with our expectations. But from this it does not follow that his mental activity always obeys the same laws as our own. In fact, in so far as it is collective, it has its own peculiar laws of which the first and the most general is the law of participation" (pp. 79-180). The last two statements, however, and one or two others of similar import, stand quite isolated and do not fall in with the main line of argument pursued throughout the work.

The author's central thesis, if I understand him correctly, consists in the contrast he draws between the prelogical character of primitive mentality and the logical character of our own, between the collective "representations" of primitive society and the concepts of civilized man. In this juxtaposition lies, I believe, the main error of the author's position. It hardly needs emphasizing that our own mentality is thoroughly saturated with collective elements. What Bruhl says about the primitive individual in his relations to the social *milieu* applies also to the civilized one. The beliefs and convictions of the one, as those of the other, are generally predetermined and fixed before he knows anything about them. As to the law of contradiction it is being sinned against in either case, although not to an equal degree, in the content of the beliefs as well as in their correlations. Moreover, much that has at one time been logically and consciously elaborated be-

comes among ourselves part of our social inheritance, and in that context assumes an extra-logical if not an illogical character. To go even further: Bruhl points out, I think justly, that, in dealing with primitive "representations" or perceptions, the real problem is one of dissociation and not of association. The psychic complexes arise on an unconscious background as direct and indecomposable apperceptions. Later, with the rise of a more analytical mentality, it is by a process of dissociation that the more purely intellectual nucleus reveals itself. I think that a process not incomparable to the above takes place in the mind of many, and in a wider sense each of one of us, when, with approaching maturity, we try to analyze and intellectualize the incoherent and heterogeneous contents of our mental selves. And, on the other hand, our logical processes and concepts are not without analoga in the mentality of primitive man. The daily life and activities of every savage are to some extent guided by logic, by *our* logic, and give evidence of such guidance, while the mental achievements of exceptional individuals whose presence in primitive communities is not inconspicuous, often reveal logical powers of no mean order. As to the general character of primitive thinking, Bruhl errs rather than Spencer and Tylor, who believed that, if we grant the savage his premises, his conclusions are rational.

The terms of the author's central juxtaposition are thus seen not to be legitimately comparable. In the light of the contrast between our conceptual thinking and the collective "representations" of the savage, the gap between the two mentalities appears wider than the facts warrant. The profoundly socialized character of our mental life is not given due weight, nor is the logical element of the savage's mental make-up. As a consequence, opportunities for fertile comparisons are neglected. By comparing the two mentalities in their collective aspects the author could hardly have failed to discover some interesting similarities and differences, many of which would no doubt have served to illustrate the author's own principle of the correlation of mentality with social structure. And again, an analysis of the primitive man as logician, when put side by side with one of us, would bring home the fact that the psychic unity of mankind extends beyond the domain of psycho-physical structure, to the fundamental processes of logical thinking.

Notwithstanding the short-comings I have tried to lay bare in this critique, the essential solidity of Bruhl's work commands respect. It deserves, in fact, to be classed as a signal contribution to the theory of ethnology. The following are a few of the points which seem to me to be particularly well taken.

One negative characteristic distinguishes Bruhl's work sharply from many

other treatises on the same subject, viz.: the absence of any attempt to arrange his material in an evolutionary series of stages of development. The results are striking. If we glance at a book like Tylor's *Primitive Culture* or Spencer's *Principles of Sociology*, vol. I, part I, the artificiality in the arrangement of data becomes at once apparent; we recognize that the moulding of ethnological facts into a genetic chain is based on hypothetical psychological postulates. A similar perusal of the table of contents of Westermarck's *Origin and Development of Moral Ideas*, shows that his classification is made from a point of view which is partly objective, partly psychological. We are thus led to suspect that the facts presented will not be legitimately comparable, and the reading of the book vindicates the suspicion. A later work of a much higher order, Wundt's *Völkerpsychologie*, is not free from a similar methodological error. Again an analysis of the table of contents of e. g., vol. IV, will suffice: the formal arrangement reveals a logical sequence; and, if one proceeds further, the mirror thus held to ethnic facts is seen to reflect a distorted picture.

Now, if we exclude the last part of Bruhl's work,—a procedure justified by the fragmentary character of that section—we notice that he approaches his subject with much greater open-mindedness than did the above authors. The treatise consists of a set of coordinated analyses which supply evidence confirmatory of the author's hypothesis. No attempt is made to pigeon-hole the material. What is lost in width is easily gained in depth. Moreover, Bruhl is thus enabled to make legitimate and forcible use of judiciously sifted ethnological material, without venturing on the slippery ground of survivals, degenerations, parallelisms, missing links, etc.

The able handling of linguistic data deserves particular notice, for this is, so far as I know, the first work of a general character which does not represent the languages of primitive peoples as poverty-stricken in vocabulary and as totally devoid of all means of expressing ideas with precision.

Frazer in his *Golden Bough*, King in *The Supernatural*, Schulze in his *Psychologie der Naturvölker*,—to single out a few out of many similar works—deal with the mentality of primitive peoples; yet the above works may be not incorrectly described as treatises on primitive religion or magic, or both. Here again Bruhl's work constitutes a departure. In dealing with primitive mentality he does not permit himself to be swayed by the, so to say, accidental identification of that subject, in literature, with the cognate but distinct subject of primitive religion. Primitive mentality for Bruhl is primitive *Weltanschauung* in its objective and psychological aspects, of which religious beliefs constitute but one phase. The term *Weltanschauung* itself, however, does not really tally with the author's point of view, and he might perhaps endorse the substitution of the term *Welteinführung*.

This brings us to another important point in the author's position. He takes a firm stand against the rationalistic interpretation of beliefs. In the production of the psychic content of an individual mind, intellectual and conscious elements play but a small part; emotional and unconscious elements, on the other hand, are the dominant factors. This principle, which flows as a natural consequence from what we know of human psychology, is no longer in its infancy; it continues, however, to be sadly neglected; and among the worst sinners against it are some of those who herald it most vociferously. Bruhl's savage does not ask questions, he is not puzzled, he does not analyze nature, nor unify his experience. The part he plays in the production of his own psychic make-up is mostly passive and receptive. The real dynamic factor, acting at first through unconscious channels but backed presently by a powerful emotional setting, is the social *milieu*. Here again Bruhl's argumentation is on a high level. True, in his insistence on the social factor, he is perhaps least original. Hubert and Mauss in their "Esquisse d'une Théorie générale de la Magie" (*L'Année Sociologique*, 1902-3) and Durkheim and Mauss in "De quelques formes primitives de classification" (*ibid.*, 1901-2) annunciated a point of view which Bruhl seems to follow rather closely. The author candidly admits that he has not succeeded in throwing much light on the relation of the individual to the group. This notwithstanding, his insistence on the social factor can but be welcomed, while his idea of the correlation between types of mentality and types of social structure, is highly suggestive.

A. A. GOLDENWEISER.

With a Prehistoric People: The Akikúyu of British East Africa; Being some Account of the Method of Life and Mode of Thought found existent amongst a Nation on its first Contact with European Civilisation. By W. SCORESBY ROUTLEDGE, M.A. (Oxon.), and KATHERINE ROUTLEDGE (born Pease), Som. Coll. (Oxon); M.A. (Trin. Coll., Dublin). London: Edward Arnold (Publisher to the India Office), 1910. $9\frac{1}{2} \times 6\frac{1}{4}$, pp. xxxii, 392; 136 plates and a map. (21s. net.)

This work on the Kikuyu is one of the relatively few recent books on East Africa which form a contribution of lasting value to ethnographic literature, and accordingly requires a somewhat extended notice. The portion of the Kikuyu tribe visited by the authors occupies the highlands bounded on the north by the equator, on the west by the Aberdare Range, on the south by the plains of Athi, while the country to the east is dominated by Mt Kenya. Beyond the Aberdare Range there live the Masai, hereditary enemies of the Kikuyu, and to the southeast stretches the country of the

Kamba, whose linguistic affinity with the Kikuyu confirms the traditional belief in a former union of these now distinct Bantu-speaking tribes.

The Kikuyu are agriculturists, and, to some extent, herdsmen. The principal grains now cultivated are maize and sorghum, neither of which is indigenous. During the season of ripening crops platforms are erected in the fields and from these elevations watchers scare off birds with stones and mud-pellets hurled from woven slings. Part of this work, as well as the clearing of the land and preliminary breaking of the ground, is performed by the men, while all other agricultural labors devolve on the women. Sheep, goats, and cattle are raised and valued very highly, a goat being the unit of value in commercial negotiations. As elsewhere in Africa, the ordinary food supply is not enriched by the meat but only by the milk of the live stock, meat being a luxury consumed only in small quantities on festive occasions. The principal intoxicant is the fermented juice of the sugarcane, and tobacco is snuffed for a stimulant but not smoked. Huts consist essentially of cylindrical clay-daubed walls topped by thatched roofs with projecting central spikes.

A detailed account is given of the industrial activities. Nothing could be more satisfactory than Mr Routledge's description of Kikuyu metallurgy. Iron is apparently obtained from a single spot, where granite rock is broken down by water artificially deflected so as to yield the ferriferous sand, which is carried down into a brook below. The ore is secured by the women and children living in the vicinity of the quarry, who wash away impurities until they get "a wet mass of black sand,"—a mixture of quartz grains with magnetite ore, which is spread on a flat rock to dry. "The [smelter's] bellows consist of a cone, or fool's-cap of sewn goat skins" terminating in a wooden pipe, which leads into an earthenware nozzle communicating with the clay-lined furnace-pit in which the ore is smelted. The result of the smelting operations is, as Professor Gowland puts it in one of the appendices to the book, "wrought iron of a steely character," which is capable of being worked by heating and hammering into a variety of implements. The apparatus used in ordinary blacksmith's work is identical with that just described, but somewhat smaller. The fact that the authors mention only the triangular skin-bag type of bellows is interesting because the Masai are known to employ in addition the more common bowl-bellows (Merker, *Die Masai*, p. 114). Pottery is likewise fully dealt with, the several processes being admirably illustrated and described. The textile arts do not seem to flourish; the reader learns of string bags, basketwork sifting-trays and woven slings, but basketry proper is apparently not highly developed.

The facts presented as to dress and personal adornment are especially

illuminating as to the extent of Masai influence. Thus, we meet the familiar method of lengthening the hair with fibers of wood bark and whipping the ends of the cords thus formed into three pendants falling over the forehead and temples. The variety of ear-ornaments, among which may be mentioned the iron-wire spiral with long depending chains, is also noteworthy, while a wire-wrapped arm clamp (plate XXVII) likewise suggests Masai influence. It is accordingly of interest to learn (p. 33) that, unlike the Masai and Kamba, the Kikuyu do not file or remove their teeth. On the other hand, the highly characteristic Masai custom of shaving the women's heads is found in full force (p. 140).

The short section on "Art" contains noteworthy illustrations of dancing shields, the designs on some of which are avowedly of Masai origin. Comparison with the shields pictured by Merker seems to the reviewer to indicate a distinctly greater tendency of the Kikuyu to give a symmetrical treatment to the decorative field. This symmetry, however, is as noticeable in the designs said to have been adopted from the Masai as in those alleged to be of native origin. Unfortunately the authors could not obtain any explanation as to the significance of the designs. On the other hand, certain gourd rattles carried by boys wandering about by themselves present series of incised lines and dots interesting mainly for the interpretations given, the entire decoration being ostensibly a pictographic account of the boy's travels. From the two rattles figured it is not quite clear to what extent there is an established association between a certain decorative element and a definite explanation. The absence of realistic treatment is noteworthy even in cases where some attempt in this direction would not present any difficulties. Thus, an amorphous little patch represents the stars, a quadrangular figure the moon. In several cases the explanation is disproportionately elaborate when compared with the design itself, so that the suspicion arises that the interpretations are largely subjective in the sense of being prompted by the more or less accidental happenings during the boy's journey. This, of course, does not prevent a certain consistency: on one of the rattles the dotted area between two homologous acute angles represents "the words of the warrior who instructs the boy," while a similar figure is explained as "the words of the boy"; on the other rattle homesteads are consistently represented by dotted areas of similar form.

The nature of the Kikuyu clan system is not quite clear. There are thirteen clans, none of them being restricted to a particular region. A man must not marry a member of either his father's or his mother's clan. Common responsibility for the murder fine seems to be the most tangible evidence of a definite feeling of clan affiliation. A number of clan taboos are men-

tioned—the Agachiku, for example, must not work iron,—but apparently the authors did not themselves obtain the totemic interpretations of clan names which they cite on Hobley's authority (pp. 20–22). For most purposes the family homestead is the unit of social life. It embraces a hut for each wife and frequently the bachelors' home, which also serves as a guest-house (p. 118). This young men's house, however, is not associated with the features distinctive of the Masai warriors' kraal. On the other hand, age-grades are hardly less prominent in Kikuyu life. A formal initiation of boys and girls with circumcision and clitoridectomy takes place at puberty, a man does not attain to what might be called a citizen's standing before the birth of his second child, and entrance into the assembly of elders or into the category of older women only follows the initiation of the man's or woman's first-born child. The definiteness of these age-classes appears from the use of distinctive dresses and modes of decoration. Thus the Kikuyu maiden wears a fringed brow band in the interval between initiation and marriage, and receives a copper-wire collar as a token of betrothal, while older women are distinguished by complete and permanent tonsure, and old men by a staff of office and a special type of ear-ring. Political life is marked by the absence of a centralized power. Prior to British interference there were no chiefs properly so called. Each owner of a homestead ordinarily acted as civil ruler, while for military purposes a limited number of homesteads might unite under a common leader. In judicial proceedings the elders took a leading part, assisted by a constabulary of *N'jáma*,—a term applied to headmen who used to take the lead in war. The relation of this police force to the elders varied in different sections of Kikuyu territory. In some districts promotion to the rank of elders implies abdication of police functions, while elsewhere continued affiliation with the *N'jáma* is optional (p. 199). A social custom of considerable comparative interest is the drinking of warm blood from living animals (pp. 174–175); it occurs also among the Masai, Latuka, Bari, and Dinka (Hollis, *The Masai*, p. xx and Plate xi). With the same tribes the Kikuyu share the custom of spitting as a means of securing good luck (p. 23), as well as for more or less ceremonial purposes.

In the section dealing with religion the authors wisely avoid the common error of over systematization. The supreme deity of the Kikuyu is usually called *N'gai*,—a term of Masai origin. He is supposed to dwell in solitary grandeur on the summit of Mt Kenya. Mr and Mrs Routledge describe a solemn sacrificial ceremony performed in honor of *N'gai*, as well as the ceremonial drinking of native beer which seems to be obligatory two days after the offering. Prayers for the well-being and prosperity of the natives

and their guests were voiced on both occasions. Brief mention is made of semi-secret organizations celebrating festivals in honor of the snake. As regards animism, the natives distinguished clearly between the principle of life (N'goro) and the spirits of the deceased (N'goma). Some of the N'goma wander about, while others pass into animals. There is also a vague conception of a dwelling-place of the dead. Almost every disease is ascribed to the action of maleficent spirits, who are sometimes especially invoked for the purpose of punishing enemies.

The medicine-man (*nundu mugu*) naturally plays an important part. It is usually only after repeated promptings by N'gai in dreams that a Kikuyu prepares for the shaman's profession, and this generally happens in late middle life. The candidate spends a night alone in the woods, then returns to his home, and takes a he-goat to his prospective instructor, who prepares for future use a small piece from the root or trunk of a special kind of bush. A day is appointed for the public initiation of the tyro into the class of medicine-men. The practitioners of the district and the candidate's relatives assemble for a feast. The candidate wades into shallow water with the goat and a small boy, grasps two handfuls of stones for his lot-gourd and returns to the village. On the way he passes a certain kind of tree against which he scrapes the goat's hoof. The tree is then cut down and a small piece placed in the tyro's gourd. At his preceptor's home the candidate receives five gourds containing medicine, and is instructed in the presence of all the professional shamans, while the crowd of spectators remains at a distance. After the slaying and cooking of the sacrificial goat, collars are made from the skin of the animal's right leg and fitted to the necks of the five gourds. The shamans present cast lots to foretell the candidate's career as a medicine-man, allowing him to appropriate the small objects cast, and finally receive a remuneration for their services. In exceptional cases shamans are translated to the abode of the Deity and favored with a special revelation; but usually the functions of a practitioner are limited to purification from ceremonial defilement, divination, and the manufacture of charms. Defilement results from various causes, such as touching a corpse, eating forbidden food, or being cursed. The purification rite seems to consist mainly in a painting of the offender's mouth with the shaman's brush and the consequent expectoration of the sin by the client. In divination the shaman pours out the small objects from his lot-gourd and arranges them in heaps of hundreds and tens, the remaining number of units apparently determining the response of the oracle, which in some cases urges the offering of sacrifices to avert disaster. Charms are very generally worn and are usually, though not always, manufactured by medicine-men, some of whom also practise witchcraft.

Under the heading of "Folklore," Mrs Routledge has collected a series of thirteen tales, to which are prefixed some fragmentary origin and nature myths. It is a question of some interest whether a fuller collection of stories would bear out the preponderance of purely human motives indicated by the material here presented.

The preceding notes are intended to give some conception of the scope of the work reviewed. It is not too much to say that this admirably illustrated and fascinatingly written book will be indispensable to the student of African ethnography, and may prove hardly less attractive to the general reader interested in primitive modes of life.

ROBERT H. LOWIE.

Iroquois Uses of Maize and Other Food Plants. By A.C. PARKER. Bulletin 144, New York State Museum. Albany, 1910. $9 \times 5\frac{3}{4}$, pp. 1-113, plates 1-31, text figures 1-23.

In this paper we have a most careful and detailed study of an important topic in the ethnology of the Iroquois. The author is in a particularly favorable position to investigate these important tribes which have for so long remained in a state of neglect on the part of the trained ethnologists. The esoterism of the Iroquois has no doubt been responsible for this. Mr Parker, however, in the series of systematic studies which it is hoped will soon appear, possesses unusual advantages with the Iroquois and if the other sides of their culture are treated in the same critical manner as that shown in his recent papers we shall have a comprehensive library on the life of these Indians.

The first few chapters of the present work deal historically with corn or maize, after which the customs of corn cultivation, and ceremonial and legendary allusions to corn from Iroquois mythology are discussed. A detailed account of Iroquois ethnobotany concerning both corn and other plants, which the author introduces later, is of interest and replete with Indian terms and ideas. One could wish, however, for a more general analyzed translation of the numerous native names of plants and implements. A full account of cooking and eating customs, of foods prepared from corn, and of the uses of the corn plant, places at our disposal a mass of supplementary information which brings one into close touch with the Iroquois household. The second part of the paper describes the uses of their food plants, beans, squashes, leaf and stalk foods, fungi and lichens, fruits and berries, nuts, sap and bark foods, and lastly food roots.

There are many illustrations which lend an air of reality to the descriptions. The paper is interestingly written, Mr Parker's graphic style com-

bing enough of easy fluency with professional detail to make his work readable to persons with only general interests, as well as to specialists. His systematic labors in a very rich field deserve much encouragement.

F. G. SPECK.

The Melanesians of British New Guinea. By C. S. SELIGMANN, M.D., with a chapter by F. R. BARTON, C.M.G., and an appendix by E. L. GINLIB. Cambridge: University Press, 1910. 9½×6, pp. xxii, 766, illustrated by drawings, photographs, and maps.

A new field for scientific study has been presented to the student of primitive peoples by this book. The maps enable the reader to place geographically the various tribes and groups of people described. The photographs of people, though few, show selection of typical Melanesians, while those of various buildings are exceptionally complete and educational.

Probably no part of the culture of a primitive people is so difficult of intelligible treatment in a book by text alone as the unique and bizarre characteristics of buildings in small culture areas; the photographs in Dr Seligmann's book are exceptionally valuable for this reason.

The book does not consider the more numerous people of New Guinea, the Papuans, but is confined to the Melanesians. These are divided into two groups, viz.; the Western Papuo-Melanesians, and the Eastern Papuo-Melanesians or the Massim. The greater part of British New Guinea is Papuan territory. The territory of the Western division of the Papuo-Melanesians begins near Cape Possession on the southern shore and extends eastward covering the south water-shed or southern half of New Guinea to the vicinity of Orangerie bay near latitude 150° E.

The territory of the Massim or Eastern division joins that of the Western division at Orangerie bay and occupies all the eastern part of the mainland and extends along the north coast westward to Cape Nelson where Papuan territory is again encountered. The numerous islands east of the mainland lying between 8° and 12° of longitude south, which are part of the British New Guinea possession, are also Massim territory.

Dr Seligmann presents first facts about the Koita tribe, a typical simply organized group of the Western division. He uses the first sixteen chapters occupying 193 pages for the Koita, and presents illuminating data on their geographical and social relations, social systems and regulations of public life, family life, courtship, betrothal and marriage, midwifery, property and inheritance, trade, war and homicide, morals, taboo, ceremonial feasts, songs and dances, funeral and mourning cere-

monies, magic and sorcery, and religion. It is seen that practically the entire life of the Koita is presented except their technical and material culture.

Chapters seventeen to twenty-five inclusive (pp. 194-310), are occupied with data concerning the Roro-speaking tribes. In these chapters Dr Seligmann has limited himself to considering "those matters of social organization in which these tribes differ from the Koita." He treats geographic and social relations, clan-badges, chieftainship, club-houses, family life, marriage, funeral and mourning ceremonies, magic and sorcery, and religion. The Mekeo tribes occupy chapters twenty-six to thirty-two inclusive (pp. 311-375). In these pages are presented those aspects of culture of the Western division in which the Mekeo differ from the Koita and Roro-speaking tribes.

The Eastern division of Massim is further divided into the Southern and Northern Massim. The Southern Massim are presented in chapters thirty-three to forty-eight inclusive (pp. 376-658). Again Dr Seligmann presents in considerable detail the social and political organizations of these peoples, as folk tales, geographic relations and history, clans and totems, regulations of public life, family life, courtship, betrothal and marriage, property and inheritance, trade, warfare, cannibalism, morals, taboo, ceremonial feasts, dances and songs, funeral and mourning ceremonies, and religion.

The Northern Massim are presented in Chapters forty-nine to sixty inclusive (pp. 660-735). These Massim were studied as to geographic and social relations, clans and totems, chieftainship, family life, youth and adolescence, courtship and marriage, burial and mourning ceremonies, and religion.

An appendix on the *Louisiades* follows (pp. 736-739), and another on the *Mukaua* by E. L. Giblin (pp. 740-746).

A glossary of native words occupies eight pages; and a good index follows.

The vast amount of material brought together in this book by Dr Seligmann makes the volume a very important one to the student of Papuan and Melanesian cultures. And these two widely different peoples are seen in the process of blending physically and culturally in the geographic area studied better probably than in any other. Aside from the newness of the field it is this blending of cultures more than anything else which makes the book so distinctive for the ethnologist.

The book making is excellent: the illustrations are superior—seldom has a finer illustration of primitive man been published than is shown in plate 2 from a photograph by Captain Barton.

While in no way do I seek to detract from the scientific worth of the laborious and careful work of Dr Seligmann I wish to take this opportunity to emphasize the contrast between the mass of the book and Captain Barton's chapter entitled "the Annual Trading Expedition to the Papuan Gulf," quotations from the late Dr Chalmers, and some of the material quoted from the Annual Reports. Dr Seligmann's part of the book is an excellent compilation and comparative study of scientific data; these other parts of the work are better, because, while equally scientific,—or the author would not have used them as he did use them,—they are intimate, sympathetic, and alive. These other authors know personally many of the individuals they present. Their human animals are live men like themselves, their scenes move before the reader, their facts are so presented that the reader takes an active part in the expeditions and other occasions. One part of the book is read because the reader is interested in the facts presented; the other he reads because of the innate human interest in the facts.

Too frequently the ethnologist's writings are desert-dry. This is due largely to two causes; one, the lack of intimate knowledge of the peoples he presents; and, the other, the apparent fear to use the imagination. Whereas, the use of the imagination to assemble the scientifically gathered facts is not only proper but wise and greatly to be desired.

ALBERT ERNEST JENKS.

A Gilbertese-English Dictionary. By HIRAM BINGHAM, D.D., Missionary of the American Board. Boston: American Board of Commissioners for Foreign Missions, 1908. Pp. viii, 179.

The Gilbert group, although by its position a most important link between Micronesia, Polynesia, and Melanesia, has remained until the present very little known. Except for rather brief descriptions by the earlier explorers of the Pacific, and the accounts of Wilkes, Finsch, etc., the literature relating to the islands is scanty and superficial. On the language spoken by the Gilbertese, there has been very little accessible, Hale's sketch in the seventh volume of the United States Exploring Expedition and Colombe's vocabulary of Arorai being the chief sources, except the translations prepared by the various missionary organizations. These previous sources have supplied comparatively brief vocabularies only, so that the present dictionary, with some 12,000 words, is extremely welcome, and affords a goodly mass of material for students of Oceanic languages.

As revealed in the dictionary and in the preface, the general pho-

netics of the language seem, as does the grammar, to be closer to the Melanesian than to the Polynesian languages. These Melanesian similarities are in many respects closer than are those of the various Caroline dialects. As stated by the author, surds and sonants are not clearly distinguished, but the former are nearer to the actual sounds. The sounds of the r-l-d group are almost interchangeable, or at least separated from one another with difficulty. This recalls the frequency of the equivalence of these sounds in the languages of Malaysia. Apparently words beginning with a consonant are relatively abundant.

The dictionary is primarily intended for the use of persons desiring to become missionaries among the people of the islands. If so, it seems curious that some provision was not made for at least a short list of the commonest words in English-Gilbertese. The arrangement wholly under the Gilbertese-English alphabet makes the use of the dictionary almost impossible for anyone wishing to learn the language, or for students who desire to compare Gilbertese forms with those in use elsewhere. The author states in the preface, that the dictionary contains, in addition to the words of Gilbert origin, several hundred Gilbertized English and Hebrew words derived from the Bible translations. One cannot help thinking, in turning the pages of the dictionary, that it is hardly necessary to introduce into the language of these people so many words of wholly foreign origin and no meaning to the people themselves. Such words as pygarg, bdellium, cor, gier, gnu, etc., seem wholly unnecessary. The great mass of the terms included in the dictionary, however, i. e., those of purely native origin, will be of much service to all students of the linguistic puzzles of this most interesting region, and all must be most grateful to the author for the great labor which he has undertaken in preparing so complete a dictionary.

R. B. DIXON.

Melanesians and Polynesians. Their Life-Histories described and compared.

By GEORGE BROWN, D.D. London: Macmillan and Co., 1910. Pp. xv, 451.

Adequate descriptions of the savage peoples of Melanesia during the early period of their contact with European nations are rare. Most of our information relative to this area dates from the last two decades. This volume, therefore, is most welcome in that it gives us observations made some thirty or forty years ago. The title of the book hardly gives an exact idea of the real character of the volume. Under the caption of "Melanesians and Polynesians," the author, an English missionary, has brought together a large mass of valuable material derived from

personal observations, and relating to the peoples of the Bismarck Archipelago (especially Duke of York and the adjacent part of New Britain) and the Solomon group in Melanesia, and Samoa in Polynesia. Incidentally, some material from portions of British New Guinea, the New Hebrides, and elsewhere is also introduced. So far as the Bismarck Archipelago is concerned, the author was one of the very first white men to come into close contact with the natives.

Taking the volume as a whole, the greatest value must undoubtedly be placed upon the Melanesian material. Samoa has been so often described, both by early navigators and missionaries, and by later investigators such as Krämer, that the author adds but little that is really new to our information. The plan of the book, which is that of comparing under various headings, such as Childhood, Religion, Government, Laws, etc., the Melanesian and Polynesian peoples, is a good one. From a strictly scientific point of view, a somewhat differing grouping of subjects might have been recommended.

Of the large number of subjects treated, the descriptions of the Dukduk and Iniet societies, the details on social organization and burial customs, and the accounts of the use of money, will doubtless be found of greatest interest. The author recognizes the traces of totemic organization in Samoa recently definitely established by Rivers, and adds an interesting bit of evidence of the two-class system from Ongtong-Java. In details, it is inevitable that the volume should suffer by comparison with the recent works of Graebner, Stephan, Meyer, Parkinson, von Pfeil, and others. Had the author published his book fifteen years ago, it would have contained a mass of wholly new material; as it is, the material is now no longer new. Yet, although the more recent observers have written in greater detail of much that is described by Dr Brown, his work supplements theirs on more than one occasion with valuable additions, and, as a whole, serves unquestionably as the most excellent treatise in English upon the area covered.

The author's general conclusions on the origin and migration of the Polynesian and Melanesian peoples are mainly in accord with the present trend of opinion. He sees in the Melanesians, an early wave of peoples coming from somewhere in southwestern Asia, who were followed much later by the Polynesians. The latter, prior to their leaving the mainland or before leaving Indonesia, were influenced more or less by contact with early Indo-European (Hindu) culture.

In conclusion, a word should be said in regard to the illustrations. These are numerous, and excellent, and add to the value of a volume

otherwise of much service to the student of Oceanic and particularly Melanesian culture.

R. B. DIXON.

The Chimariko Indians and Language. By ROLAND B. DIXON. University of California Publications in American Archaeology and Ethnology, vol. 5, no. 5, pp. 293-380. Berkeley: The University Press, 1910.

In this paper Dr Dixon gives us another study of the ethnographic region in which he is a recognized authority, that of northern California. Unlike the Maidu, Shasta, Achomawi, and Atsugewi, however, with which tribes Dr Dixon has heretofore concerned himself, the Chimariko no longer exist as a distinct tribe, but linger on in only two aged individuals; from one of these, Mrs Dyer, and from a man named Friday, who, though not a Chimariko, had formerly been in close touch with the tribe, the material presented in the paper was gathered in 1906. As indicated by its title, the paper falls into two parts, the first dealing with culture (pp. 295-306), the second with language (pp. 307-380). The topic of culture, discussed under the heads of territory and history, material culture, social organization, and religion, is necessarily very fragmentary and calls for no particular comment.

The linguistic portion is fuller than the ethnologic, but as the grammatical material obtained was fragmentary, and the few texts that are given are confused and unsatisfactory, many points of importance remain obscure. It would be wholly unfair to judge Dr Dixon's work as one might a grammatical treatise laying claim to completeness. The circumstances under which the material was secured were such that it seems rather in order to thank Dr Dixon for having rescued as much of the Chimariko language as he did. The linguistic material is discussed by him under the heads of phonetics, reduplication, composition, pronoun, noun, verb, adjectives, numerals, postpositions, connectives, and order of words.

There seem to be two series of stopped consonants, surds and sonants; judging from such not far distant linguistic stocks as Takelma, Athapascan, and Yana, in which aspirated surds and "intermediates" but no true sonant stops are found, one may be permitted to surmise that Dr Dixon's sonants are really intermediates, as he himself expressly states for *b*. It is surprising to find that no distinct series of "fortes" or checked stops is credited to Chimariko, the more so as not only the three stocks already referred to but also the immediately adjoining Wintun and Shastan (as represented by Achomawi) possess these consonants, as the reviewer

knows from personal experience. Such orthographies in the vocabulary, however, as *p'untcibum* "six" and *t'amina* "flea" strongly suggest that the fortis series is not absent in Chimariko. Moreover, Dr Dixon does not always carefully keep apart, it would seem, fortes from ordinary surds. Thus, the Achomawi form *hak* "two" (p. 338) was distinctly heard by the reviewer as *hak!*, with which its Chimariko cognate *xok'u* is in striking agreement.

Reduplication of an interesting type occurs in Chimariko, that in which the latter part of the stem is repeated, as, *tsokoko-tci* "bluejay," *himimitcei* "grouse." This type of reduplication is also frequently employed in Chinookan in animal names. Very characteristic are the pronominal affixes, one series being employed as subjects of neuter verbs, objects of transitive verbs, and possessives with nouns inherently possessed, while the other series is restricted to subjects of active verbs and to indicate accidental possession. The use of distinct pronominal elements to differentiate active from neuter verbs and natural from acquired possession is reminiscent of Siouan. It is very strange indeed that certain verb stems require the pronominal elements to be prefixed, while others take them as suffixes; inherent possessives are always prefixed, accidental possessives suffixed. Syntactical cases are lacking in the noun, while material cases, as far as Dr Dixon's material allowed him to gather, are confined to a locative-ablative and an instrumental. The verb complex includes, besides the stem and pronominal affixes of subject or object (never, it would seem, of both subject and object), a set of instrumental prefixes, local suffixes, and, always last in the complex, temporal and modal suffixes. The prefixes of body-part and other instrumentality, expressing such ideas as "with a long object," "with the end of a long object," "with the head," "with the foot," "with a round object," and "with the hand," are interesting as affording another example of a widespread American tendency. Such prefixes occur, as Dr Dixon remarks, in the Shasta, Maidu, and Wintun stocks in the neighborhood of Chimariko; outside of these also in Shoshonean, Siouan, Pomo, and, though not quite analogously, Takelma. The local suffixes, again a well developed morphological category in America, include elements expressing such ideas as "down," "up," "into," "out of," "across," "through," and "towards"; their use makes intelligible the defective development of case suffixes in nouns. Among the modal affixes the negative is peculiar in that it is in some cases prefixed, in others suffixed.

After the grammatical sketch proper Dr Dixon takes up the matter of the possible genetic relationship of Chimariko and Shastan (Shasta,

Achomawi, Atsugewi). A few general morphologic resemblances are noted; by far the most striking point of resemblance, however, in the opinion of the reviewer, is not referred to in this connection, but is mentioned earlier in the paper, namely the use of pronominal elements as both prefixes and suffixes. A table of fifty-seven lexical correspondences, embracing body-part nouns, natural and cultural objects, three numerals, verb stems, instrumental prefixes, local suffixes, and pronouns, is given as the main evidence of a Chimariko-Shastan linguistic unit. A few of the examples seem rather far-fetched, but on the whole the evidence appears convincing, the more so as so many of the correspondences are with the non-contiguous Achomawi rather than with the neighboring Shasta. With Chimariko *-pen*, *-hen* "tongue" seems to be cognate not only Shasta *ehena*, as noted by Dr Dixon, but also Achomawi *ip'li* (reviewer's manuscript material). On the whole the weight of probability is in favor of the genetic relationship proposed by Dr Dixon. In the absence as yet, however, of extended grammatical studies of the Shastan dialects, it is difficult for the student to express a definite opinion.

Six text fragments, with interlinear translations and grammatical notes, follow. Their extremely disjointed character lessens very considerably the value of these for either linguistic or mythological purposes. Vocabularies, English-Chimariko and Chimariko-English, close the paper. One criticism can be made of these vocabularies—Dr Dixon does not seem to have taken pains to combine in them the lexical material which he obtained as such with that which is scattered in his grammatical notes and texts. Thus, the text words *xatci'la* "children" and *aqā'deu* "grass seed" (p. 347, ll. 5, 10) are to be found listed in neither of the vocabularies. Conversely, grammatical material scattered in the vocabulary is not made use of to the extent that could be desired in the grammatical sketch. Thus, the word *lētretre* "spotted," evidently an excellent case of final reduplication, is not listed in the examples given under the heading "reduplication"; this form is particularly interesting in view of Dr Dixon's statement, "Color adjectives, it is interesting to note, do not appear to be reduplicated."

In other words Dr Dixon does not seem to have completely utilized all his material; the very fragmentariness of the material makes it particularly desirable that the most should have been made of it. Despite the various points of criticism offered Dr Dixon's paper must be considered a valuable contribution to our knowledge of Californian linguistics.

EDWARD SAPIR.

La Religion des Primitifs. By A. LEROY. Paris: Gabriel Beauchesne et Cie, 1909. 16°, pp. vii, 518.

The author of this really remarkable book is A. LeRoy, Bishop of Alinda and Superior General of the *Pères du Saint-Esprit*. His missionary career in Africa began in 1877 and continued, with two brief interruptions, to the time of his writing the book. He has thus been for nearly thirty years in contact with African natives. His first experiences were in East Africa, entering (like the explorers of that time) from Bagamoyo and penetrating to the Victoria Nyanza, the Nyassa, and the Upper Congo. He later made extended journeys from Somali Land to Mozambique and in the country behind. In 1893 his activities were transferred to the West Coast, to Gabun. He has thus come into contact with coast peoples, with the dwellers of the Lake Region and with the tribes of the equatorial forest. He has met Bantu of many tribes and many and separated groups of pygmies. He speaks some Bantu languages, and has come into truly intimate relations with his blacks for whom he evinces great affection.

A first assumption might be that a book upon African religions by a Catholic bishop could be neglected by the anthropologist. Not so with the book before us. Bishop Le Roy is a man of candid spirit and broad views; he has read and studied anthropological theories; he has grappled with the definition and significance of *totemism*, *exogamy*, and those kindred words which have caused prolonged and bitter controversy among ethnographers and sociologists. He finds himself unable to agree with prevailing views regarding the origin of religion. He aims to meet us on our own ground. With firm convictions of his own, he tries to disabuse his mind of prejudice; he presents the facts which he has found, tests our theories by them, and states the conclusions to which he is driven. He does all this with an honesty and candor which compel admiration and a vigor and force which demand consideration. Not that we agree with all the bishop's conclusions, in fact we dissent from most of them. But such a challenge of our views is worth far more to our science than many of the ingenious, but premature, theories with which anthropological literature abounds. LeRoy presents a mass of instructive and interesting material; we shall consider but a single point. He says:

"The religion of the primitives ought then to be as clearly as possible separated from Magic, from Mythology and from Superstition. When this is done one finds it to consist of recognition of departed spirits, of tutelary spirits, and of a sovereign being, Master of Nature and Father of Men, with moral observances and the practice of prayer, offering and sacrifice" (p. 453).

And again:

"Had we not the constant fear of misrepresenting the beliefs of our indigenes in attempting to put them in formal statement we would say that for them the invisible world is composed, so to say, of three planes, of which the first would be formed by the spirits of the dead, the second by spirits of extra human origin, and the third by that sovereign being, whom we have already recognized as the mysterious Master of Nature and for whom we find no name more just to apply than that of 'God'" (p. 136).

In his discussion of this sovereign being, Bishop LeRoy makes an important contribution to the question of "high gods," so much considered of late. While for him the existence of this notion is explicable solely on the basis of an original divine inspiration, he presents facts in his discussion which perhaps point to a reasonable explanation of a matter which has long been a stumbling block. The evidence that savage and barbaric peoples have an idea of a supreme being is too strong to be brushed away by flippant reference to missionary or other outside influences. It is a waste of time to struggle against facts. Such a notion exists and in practically the same form among a host of tribes in Australia, Africa, and America. LeRoy finds it clear and unquestionable even among the pygmies. If such a belief exists among the religious ideas of low tribes, there must be something in the range of simple thought and life experiences of those tribes, upon which or out of which the belief has grown. Our task should be to find the origin of the belief—as we believe we have found the origin of animism and of the notion of a separable soul.

Of course a complete and precise definition of this superior being is nowhere made. LeRoy, however, brings together some of the elements which generally occur in the conception:

"This notion brings naturally to the spirit that of master, of proprietor, of sovereign of the Universe; *Mwingyezi*, "he who has the power." Taylor writes "And it is no doubt why the natives experience a sort of scruple in selling a piece of land: in their thought one can only alienate the trees." If the reader will remember, this is exactly the statement which we ourselves have previously made.

Master of the World, God is also Father of Men; *reru yajio*, our father, the Mpongwe of the Gabon voluntarily say of him and their neighbors the Benga have an identical name in the expression *paia nzambi*.

Author of life he is also author of death, in the sense that he takes when and as he will the souls of men without anyone being able to hinder or to blame him. This is why, in case of death, one takes care to seek from whence the fatal issue has come: if it has been brought about by an enemy, open or secret, the relative ought to be avenged; if it is caused by a spirit, it should be disarmed by a sacrifice

but if it comes from God, there is nothing to be done. What can one do against God?

*

*

*

It is God finally who sends the rain in warning men by the voice of the thunder, and it is he who withholds it; it is he who makes the grass grow in the plains for the herds; it is he who clothes the forests in verdure, who makes the fruits ripen and the fields to prosper; it is he who nourishes all—trees, animals and men. . . . The entire world, in a word, is dependent upon him."

There are various names for God throughout the Bantu languages and LeRoy makes an interesting analysis of them, to find the underlying ideas, but space does not admit of its presentation. A final quotation only can be made; it points to a series of facts and ideas often mentioned by the author, which appear to deserve careful study.

"This fundamental conception, always living and inspirer of so many others, is that man in this world is not completely at home. He finds himself therein without much knowing how, nor through whom, nor why; he has wandered and he wanders in a domain which seems freely open, he meets there with many things which he desires. . . . But all this is not of his making, he is not its owner, it would be wrong for him to dispose of it as master, and that which nature thus offers to him, is it not a sort of bait, put within reach of his hand to tempt him?

*

*

*

It is thus that the Master of things, who, for concealing himself from human eyes, is no less redoubtable, frequently does reveal himself by unexpected manifestations and checks us in our immoderate desires of putting our hand on all; whence, without speaking of indigestions where the forbidden food makes protest, proceed poisonings, sicknesses, deaths, epidemics, accidents, floods, drought, etc. For if, consciously or unconsciously, we did not disarrange the machinery of the world by throwing in among the mechanism handfuls of sand—that is, forbidden acts—it would truly never be thrown out of gear. Or to speak in other terms, if the universe appeared before man like a table spread with food, there are yet certain precautions to take, certain courtesies to perform, certain restraints to observe before seating oneself at the feast."

Are there not here suggested some thoughts of savage man so simple and natural that they might form a ready basis for a truly primitive (or early) conception of a "high god"?

FREDERICK STARR.

Im Afrikanischen Urwald. By FRANZ THONNER. Berlin: Dietrich Reimer (Ernst Vohsen). 1898. 8°, pp. x, 116, plates 86, maps 2.

Von Kongo zum Ubangi. By FRANZ THONNER. Berlin: Dietrich Reimer, 1910. 8°, pp. xi, 116, plates 114, maps 2.

Thonner's primary object in his African expeditions was the collecting of plants. His first expedition was in 1896, his second in 1908-1909;

both were flights, the total time spent in the Congo region being only about six months. Thonner is, however, an indefatigable worker and, in addition to collecting his plants he made meteorological observations, kept close track of his hours of travel, watched the face of nature, and intelligently noted the life and characteristics of the populations encountered. The area he penetrated is relatively little known and his books are a genuine contribution to knowledge. In 1896 he struck in from the Congo at Lisala (Upoto) to Monveda, followed up the Dua to Dundusana, and then struck out toward Mongende, with a side journey paralleling the Congo from Mondunga to Dubo. In his second journey he went a little farther up the Congo, to the mouth of the Itimbiri; going up that river to Mandungu, he struck into the interior, connecting with his old trail at Mongende, and then pushing on into the interior to Yakoma on the Ubangi, at the end of the Uele. In his notes upon life and customs, Thonner does what few travelers have done—emphasizes the differing character of house architecture from people to people; in reality practically every little tribe has its own style of house building and village arrangement. The route followed cuts the boundary between tribes of Bantu and non-Bantu speech and Thonner better defines this limit than had before been done. He locates it between 2° and 4° North latitude and says it is practically marked by the Lua, Dua, and Rubi rivers although at some points Bantu languages (Ngombe and Ababua) reach the Ubangi and Uele Rivers. He groups the populations visited as follows:

BANTU, three groups:

Bangala.—Babangi, Bangala, Bapoto—Baloi, Ngiri, Tenda, Lubala (on lower Ubangi to the junction of the Lua), Balolo (Mongo) south of the middle Congo.

Ngombe.—Bwela, Magunza (Elombo), Budja (between the Dua and the Congo), Mabali (Mobali) on the Dua, and the “Ngombe” dwelling south of the Upper Ubangi.

Ababua.—Ababua and relatives, as Mobenge, Likwangula, and Dundusana.

NON-BANTU (Sudanese negroes), five groups:

Mandjia.—Mandjia and Baya: north from Ubangi and in Sanga region.

Bwaka.—Bwaka, Mondjembo (Monsombo), Banziri: Middle Ubangi region.

Banda.—Banza, Ngobu, Banda (north of Ubangi): from 2° N. to upper and middle Ubangi.

Sango.—Sango, Yakoma (Upper Ubangi); Bongo (south of them) and Mongwandi (north part of the Mongala bend) and southward to the Dua.

Mondunga.—Near the post of Ngali, one day north from Lisala and Upoto.

The last of these non-Bantu speaking peoples is of special interest on account of its far southern range and its nearness to the Congo proper. In 1906, with the aid of the Rev. William Forfeitt, missionary at Upoto. I recorded a careful though small vocabulary of it.

Thonner presents a valuable table regarding the twenty-two populations visited by him, in which he places side by side, in columns, for ready comparison, the characteristic facts relative to tribal marks (facial cicatrization), woman's dress, peculiarities of dress, village arrangements, house construction, linguistic connection, and the numerals from 1 to 5. A large amount of ethnographic material is here conveniently condensed and arranged. Thonner's interest in linguistics is everywhere evident and from each people visited, he secured a vocabulary of forty words, ten numerals, thirty others. These vocabularies are given in an appendix. Both volumes are abundantly illustrated with plates from his own negatives; they are for the most part good and the reproduction is of high grade; about one half of the illustrations are of ethnographic interest—the others represent plant life, scenery, and colonial development. In an appendix, Thonner gives a careful day-by-day record of his travels—direction of march, time from place to place, etc. This conscientious record is made the basis for map construction by M. Moisel of Berlin, which is an actual contribution to Congo cartography.

FREDERICK STARR.

Les Warega. Edited by G. VAN OVERBERGH. Bruxelles: Ad. de Wit, 1909. 8°, pp. xx, 376, plates and map.

The fifth of the great series of ethnographic monographs on the peoples of *Congo Belge* deals with the Warega (=Vuaregga, Valega, Balegga, Balegghe, Walega, Wallegga, Waregga). They are a forest people, living in the eastern part of *Congo Belge*, west of the upper end of Lake Tanganika. The preceding volumes of the series have been noticed in the *American Anthropologist*, and the plan of work and method of presentation are already known to our readers. In this case the collection of previously-existing literature forms an insignificant part of the volume. There are few references to the Warega in ethnological and geographical literature and what has been written relative to them (largely in Italian)

is so vaguely localized in place and race as to be almost worthless. The book consists almost entirely of the work of one man, Commandant Delhaise, who, *while located in the region* and among the people made careful replies to the *Questionnaire* issued by the Belgian Sociological Society, which forms the basis of the whole series. This gives his work exceptional value; such observations, carefully written down at the time, by a permanently settled student, conscientiously pursuing his investigations, are worth far more than replies to oral interrogation, made long after the return from a field where no actual investigations were conducted. Some of the replies are perfunctory but on the whole they are intelligent and carefully made and the book is an important original contribution to the knowledge of a before almost unknown population. The Warega live in the region of the Elila and Ulindi Rivers and are forest-dwellers. They are divided into *Ntala* (highlanders) and *Malinga* (lowlanders), differing considerably from each other. They are frequently called *Mwami*, which is primarily the name of a head-covering worn to indicate a certain social position. Perhaps the most striking matter in the book relates to their complicated social system.

FREDERICK STARR.

La Obstetricia en México. Notas Bibliográficas, Etnicas, Históricas, Documentarias y Críticas, de los orígenes históricos hasta el año 1910. Colegadas y ordenadas por el Dr. NICOLAS LEÓN, Director del Consultorio Num. 2 de la Beneficencia Pública en la Ciudad de México. Partes 1a. y 2a. México: Tip. de la Vda. de F. Díaz de León, Sucrs., 1910. Pp. viii, 67, 748. Illustrated.

This volume, published in connection with the celebration of the centenary of Mexican independence, gives a detailed history of obstetrics in Mexico from the period of the Spanish conquest down to the present day, with numerous photographs of distinguished physicians, biographical notes, etc., descriptions of hospitals, methods of treatment, laws and regulations, etc. The first part, consisting of some 70 pages, gives a Bibliography (two columns to the page) of 1011 titles relating to the science of obstetrics in Mexico. The main data in this book include some interesting information concerning Mexican midwives past and present. For the anthropologist and the ethnologist, the section (pp. 3-92) on obstetrics among the aborigines of Mexico in pre-Columbian and in modern times will be of service. Among the authorities cited, more or less at length, are Clavigero, the Mexican and Mayan Codices, Orozco y Berra, Ruiz de Alarcón, Muñoz Camargo, Nuñez de la Vega, Landa, Hrdlička, Alderman, etc. The little pictures of Indian babies on all-

fours (p. 87) are what an American might call "cute." To what he finds in other writers old and new Dr León has added some of his own observations among the Indians. Following the account of aboriginal obstetrics come some notes on the practices and superstitions of the *métis* and Mexicans of the lower classes, with whom both old Indian and old European folk-lore makes its presence felt. As an example of European, or rather Oriental (Egypt and Palestine) superstition imported into Mexico, the author cites (p. 123) the use of the so-called "rose of Jericho."

ALEXANDER F. CHAMBERLAIN.

The Racial Anatomy of the Philippine Islanders, introducing New Methods of Anthropology and showing their Application to the Filipinos, with a Classification of Human Ears and a Scheme for the Heredity of Anatomical Characters in Man. By ROBERT BENNETT BEAN, B.S.M.D., Associate Professor of Anatomy, The Tulane University of Louisiana, New Orleans, La.; formerly Associate Professor of Anatomy, Philippine Medical School, Manila, P. I. With Nineteen Illustrations reproduced from Original Photographs. Seven Figures. Philadelphia & London: J. B. Lippincott Co., 1910. Pp. 224.

As with Africa of old, so now-a-days with our far-off eastern possessions, *e Philippinis semper aliquid novi*. This time it is the *Homo Philippinensis*, close kin of him of ancient Heidelberg. According to Dr Bean (p. 231) he is "a being somewhat apart, typical of neither the primary nor the secondary Australoid," at least as represented by the man of Taytay, whose photograph is given with anthropometric details (pp. 228-232). On the basis of "primordial man with a form similar to *Homo Heidelbergensis*, *Mousteriensis* and *Philippinensis*," the author derives the races of man in all parts of the globe, by variation, differentiation, segregation, modification, interbreeding, conglomeration, re-combination, etc. One is forced to admire Dr Bean's synonymy at times, as, e. g., when he goes still further and speaks (p. 29) of "the Australoid type" as "supposed to represent a mosaic of Iberian and Primitive," and, again (p. 30) of the Alpine as "apparently another mosaic of the Iberian and Primitive types." Dr Bean recognizes (p. 221) "three fundamental units of mankind, the Iberian being the fundamental European type, the Primitive being the type of the Orient, and the Australoid the primary negroid element." The other types, Cro-Magnon, Alpine, etc., "are modifications and combinations of the three fundamental types." Concerning the Filipinos the author observes (p. 224): "The Filipino peoples, exclusive of the Moros, are derived principally from East Indian sources, the southern Pacific Islands, China and

Japan, and Europe. Continual intermingling has failed to eradicate, or fuse or blend the three fundamental types, Iberian, Primitive and Australoid, which continue in comparative purity throughout the Philippine Islands." What the future has in store in this part of the world is thus stated (p. 218): "Fusion of the mass of Filipinos throughout is evident in the formation of a blend that will probably be largely Primitive, or between that and the Adriatic, because in the course of time the Iberian elements will be eliminated to a great extent by disease, especially tuberculosis." In the differentiation of Filipino types "color markings have been of no value," "hair form has been of little avail (they all have straight black hair, with an occasional wave)," and "the cephalic index has been found unreliable because of possible distortion of the head." The ear, however, has not failed, for "the ear-form has been found a better indicator, and by this alone much can be known as to the individual's component elements (p. 217)." Primitive ears, we are told, "are almost the reverse of the Iberian in every respect (p. 195)"; the Australoid and Primitive ears are "old types," "the Iberian type D, A and C ears are intermediate, the Iberian type B, and B.B.B. ears are new types," "the others are mixed, intermediate and new." This reasoning makes the Filipinos older than the Chinese, Indians, or Spanish, since they have "older ear-types" (p. 188). This use of the ear as a universal anthropometer, prehistoric and modern, and as a sort of talisman or philosopher's stone for the discovery and the determination of human types, is something neither anatomists nor ethnologists will readily agree to, since variation in the form of the ear is about the least likely of any human physical character to possess fundamental significance. Chapter VIII of the book is devoted to "the omphalic index," which is found "by dividing the distance of the umbilicus from the pubic spine by its distance from the suprasternal notch, thus indicating its relative position on the body. By the use of this index, "the relative amount of Iberian and Primitive stock in a people composed of the two stocks can be determined with a fair degree of accuracy" (p. 164),—thus the Russian women measured by Teumin, "are 34 per cent. less Primitive than the Igorot women, 30 per cent. less Primitive than the women of Taytay, etc." In his researches Dr Bean, besides examining the ears of "several thousand Filipinos from every part of the Archipelago," took measurements of "about 800 students of the Trade and Normal Schools of Manila, more than 100 Igorots, 500 individuals of Taytay and Cainta, and about 200 subjects of Malecon Morgue." For comparison he used also the measurements of 100 American negroes (Johns Hopkins Hospital), 1000 students of the

University of Michigan, and 1,500 school-children of Ann Arbor, Mich. The origin records are on file at the Wistar Institute of Anatomy, Philadelphia, Pa. Out of them Dr Bean has made an interesting and well-illustrated book, even if one cannot agree with very many of the positions he takes or the theories he advances. The reviewer for one is not yet prepared to swear by the ear as the supreme court of racial anatomy. One might perhaps say that the author's material is better than his uses of it.

ALEXANDER F. CHAMBERLAIN.

Philippine Studies. I. A Little Book of Filipino Riddles. Collected and edited by FREDERICK STARR. Yonkers, New York: World Book Co., 1909. Pp. 133.

In this little book Professor Starr gives us the native texts and translations, with explanations, etc., of 416 Filipino (Tagal, Ilocan, Pangasinan, Gaddang, Pampangan, Visayan, etc.) riddles, collected by him, chiefly from school-boys belonging to various peoples of the islands in 1908. In an introduction (pp. 5-22) riddles in general and Filipino riddles in particular are discussed in an interesting way. The distribution of these riddles as to subjects is as follows: Animals (mammals), 1-13; bell, 14-17; betel, 15-21; birds, 22-28; boats, 29-35; body (parts), 36-78; book, 79-80; candle, 81-85; cardinal points, 86; clock (watch), 87-89; coffin, 90; disease, 91-92; dress, 93-99; drinks, 100-101; egg, 102-104; fish, 105-114; fruit, 115-143; furniture, 144; games, 145; greeting, 146; hammock, 147-148; heavenly bodies, 149-163; hole, 164; house and parts, 165-177; implements, 178-196; insects and other invertebrates, 197-213; lamp, 214-216; love, 217-222; mat, 223-225; mirror, 226; musical instruments, 227-229; nature elements, 230-232; number, 233; occupations, 234-238; persons, 239-251; plants, 252-284; qualities, 285; relationship, 286-289; religious, 290-317; reptiles, etc., 318-326; road, 327-329; shade, shadow, etc., 330-335; smoking, 336; storm, sky, etc., 337-345; stove, 346-352; time, 353-354; tools, 355-359; toy, 360-361; trunk, 362-363; umbrella, 364-365; utensils, etc., 366-393; vegetables, 394-405; vision, 406; waves, 407; word-plays, 408-416. Many of these riddles exhibit a curious combination of foreign (Spanish, Christian) influence and local coloring or adaptation. As Professor Starr indicates, our famous "Humpty Dumpty" is represented by the Ilocan (p. 49, No. 102):

Yti papapugan ti Ari; no maluctan saan nga maisubli.

The lime-box of the king; if you open it you cannot restore it.

The answer is *Itlog*, "Egg." The riddle of the "Pig" (No. 9, p. 27) is *sui generis* and quite Oriental besides. Nos. 170 and 237 are markedly of

local origin. Professor Starr is of opinion that "the true riddles in our series are largely original Filipino, while the insoluble riddles, the catches, the plays on words, are those where foreign influence is most evident (p. 20)." Coarseness and stupidity characterize a considerable number of Filipino riddles as they do likewise those of other peoples. The commonest form in which the Filipino riddle is cast is "two well-balanced rhyming lines," each line usually containing from five to seven syllables. Young people are the chief propagators of riddles among the Filipinos, and they "are much in vogue when a young gentleman calls upon his sweetheart." With the Tagals and Pampangans "the chief occasion for giving *bugtong* (riddles) is when a little group are watching at night beside a corpse." The various Filipino peoples have diverse names for riddles: Tagal and Pampangan *bugtong*; Bisayan *tugmahanon*; Pangasinan *boniqueio*; Ilocan *burburtia*, etc. The author intends this interesting little monograph to be the first number of a series of "Philippine Studies," each of which will treat independently of a distinct and separate subject.

ALEXANDER F. CHAMBERLAIN.

The Stone Age in North America. By WARREN K. MOOREHEAD. Boston and New York: Houghton Mifflin Company, 1910. 2 vols. 8° (price \$5.00).

In these volumes the author has attempted to group the various objects of stone, bone, shell, copper, etc., and to classify them according to his own conceptions; but, unfortunately, much irrelevant matter has been included, and the pages are replete with inaccurate, misleading statements, rendering the work, for all practical purposes, quite valueless.

Within the space of a brief review it will not be possible to refer to the many paragraphs that challenge criticism, but it will be well to understand the author's theories upon which the present work is based. On page 4, volume 1, is found this statement: "It has occurred to me that those museum men who collect and study modern material more than the prehistoric have not a clear perspective of the past in this country." This is the key to the whole work, and as a result of his adherence to this theory and failure to "study modern material" he has erred in the identification of certain objects. As an example, certain bone implements from a "Mandan site in North Dakota" (vol. II, p. 146 and p. 151), are identified as "bone celts . . . hollowed after the manner of Eastern stone gouges." Now as a matter of fact these are examples of the bone implements made by the Chippewa and other northern tribes at the present time, and used by them in removing the flesh from the inner surface of hides, during the process of tanning. Many examples are to be seen in museum

collections; therefore, contrary to the belief of the author, it appears that a knowledge of the arts and customs of the living tribes tends to shed light on the manners of their predecessors.

And again, the author is evidently of the belief that the majority of objects of stone, etc., forming the collections in museums possess great antiquity as he writes (vol. I, p. 10): "Most of these exhibits are of objects in use long before Columbus discovered America." It is difficult to understand how such a conclusion could have been reached, and the author has evidently lost sight of the fact that for many generations subsequent to the year 1492, the Indian remained in his primitive condition and fashioned objects of stone, bone, and shell; and moreover that scarcely five generations have elapsed since the greater part of America was occupied by the native tribes, maintaining their aboriginal manners and customs, little influenced by European contact. It will thus be seen that in the preparation of this work the author has been influenced by the belief that the various objects found on the surface near village sites, or in contact with burials, represent the work of tribes so ancient that no knowledge of the origin or use of the objects can be gained by studying the habits and customs of the living tribes. In this connection it would be interesting to know how he would treat material from a known historic site.

The closing chapters (XXXVI-XXXVII) of the second volume are devoted to the "conclusions." This section opens with a reference to "The Population in Prehistoric Times"; it contains various contradictory, ambiguous statements, so we pass on to the next section "The Stone Age in Historic Times,"—a most interesting subject,—but, after writing, "It is unfortunate that Coronado, De Soto, Captain Smith, Hennepin, Marquette and the Pilgrim Fathers did not give us more detail about stone-age times" the author disposes of the subject by quoting a few paragraphs from a work on the "Seri Indians living on an island in the Gulf of California"! Following this section are a few pages on "The Antiquity of Man in America," referring to the work of certain "real archeologists" in the Delaware valley. Other sections follow including: "Art in ancient times and modern art" and "The Stone-age point of view."

Following the conclusions is a bibliography which does not, however, purport to be complete.

The work contains some very good illustrations—and many of an inferior quality,—but they do not appear to have been selected to show the various types of objects; rather, the text seems to have been prepared to suit the available illustrations.

D. I. BUSHNELL, JR.

SOME NEW PUBLICATIONS

AVEBURY, The Right Hon. Lord. *The Origin of Civilization and the Primitive Condition of Man. Mental and Social Condition of Savages.* Sixth Edition (1902), reissue with a new preface. London: Longmans, Green and Co., 1911. $8\frac{1}{2} \times 5\frac{1}{2}$, pp. xxxii, 577; 5 plates, 20 figures, frontispiece.

BARING-GOULD, S. *Cliff Castles and Cave Dwellings of Europe.* Philadelphia: J. B. Lippincott Co., 1911. $8\frac{1}{2} \times 5\frac{1}{2}$, pp. 324, 51 ill. and diagrams.

BEUCHAT, H. and RIVET, P. *Affinités des Langues du Sud de la Colombie et du Nord de l'Équateur (Groupes Paniquita, Coconuco et Barbacoa).* Extrait du Muséon, 1910. Louvain: J. B. Istas, Editeur, 1910. $10\frac{1}{2} \times 6\frac{1}{2}$, pp. 94.

BOAS, F. *Abstract of the Report on Changes in Bodily Form of Descendants of Immigrants.* (A report of the Immigration Commission.) Washington: Gov't Printing Office, 1911. 9×8 , pp. 58, 23 figs.

—, Kwakiutl Tales. (Columbia University Contributions to Anthropology, vol. 2.) New York: Columbia Univ. Press; and Leiden: E. J. Brill, 1910. $9\frac{1}{2} \times 6$, pp. viii, 496, 1 ill.

CHURCHILL, WILLIAM. *The Polynesian Wanderings: Tracks of the Migration Deduced from an Examination of the Proto-Samoan Content of Efate and other Languages of Melanesia.* Washington: The Carnegie Institution, 1911. 10×7 , pp. viii, 516, map.

CONANT, CARLOS EVERETT. *The RGH Law in Philippine Languages.* (Journal of the American Oriental Society, Volume XXXI, Part I, 1910.) $9\frac{1}{4} \times 6$, pp. 70-85.

COWAN, JAMES. *The Maoris of New Zealand.* Melbourne and London: Whitcombe and Tombs, 1910. $8\frac{1}{2} \times 5\frac{1}{2}$, pp. xxiv, 356, ill.

CUMMINGS, BYRON. *The Ancient Inhabitants of the San Juan Valley.* Bulletin of the University of Utah, vol. iii, no. 3, pt. 2. Salt Lake City, November, 1910. 9×6 , pp. 45, ill.

DILLENIUS, J. A. *El Hueso Parietal Bajo la Influencia de la Deformación Fronte Occipital. Contribución al Estudio Somático de los Antiguos Calchaquíes.* Buenos Aires, 1910. $11 \times 7\frac{1}{2}$, pp. 92, 14 plates, 21 text figures, tables.

DUNN, W. E. *Apache Relations in Texas, 1718-1750.* (The Quarterly of the Texas State Historical Association, vol. 14, no. 3, Jan., 1911.) Austin, 1911. 9×6 , pp. 198-274.

EASTMAN, C. A. *The Soul of the Indian.* Boston: Houghton Mifflin and Co., 1911. $7\frac{1}{2} \times 4\frac{1}{2}$, pp. xiv, 170.

GATES, WILLIAM E. *Commentary upon the Maya-Tzental Perez Codex, with a concluding note upon the Linguistic Problem of the Maya Glyphs.* (In Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, vol. vi, no. 1.) Cambridge: Published by the Museum, November, 1910. $9\frac{1}{2} \times 6\frac{1}{2}$, pp. 1-64.

GRAEBNER, F. *Methode der Ethnologie (Kulturgeschichtliche Bibliothek, 1. Reihe: Ethnologische Bibliothek mit Einschluss der altorientalischen Kultur-*

geschichte). Heidelberg: Carl Winter's Universitätsbuchhandlung, 1911. $7\frac{3}{4} \times 5$, pp. xvii, 192.

GRUBB, W. B. (ed. by T. M. JONES). Unknown People in an Unknown Land: an Account of the Life and Customs of the Lengua Indians of the Paraguayan Chaco with Adventures and Experiences met with during twenty years' Pioneering and Exploration amongst them. Philadelphia: J. B. Lippincott Co., 1911. $8\frac{1}{2} \times 5\frac{1}{2}$, pp. 330, 53 ills., map.

HADDON, A. C. History of Anthropology. New York: G. P. Putnam's Sons, 1910. $6\frac{1}{4} \times 4$, pp. 206, ills.

A brief popular work.

HADDON, KATHLEEN. Cat's Cradles from Many Lands. London: Longmans, Green and Co., 1911. $7\frac{1}{2} \times 5\frac{1}{4}$, pp. xvi, 95, 59 ills.

HALLMANN, W. N. Education of the Indian. New York, (1910). $9\frac{1}{2} \times 6\frac{3}{4}$, pp. 36.

HODGE, F. W. Jumano Indians. (Reprinted from the Proceedings of the American Antiquarian Society at the Semi-Annual Meeting, April, 1910.) Worcester, 1910. $10 \times 6\frac{1}{2}$, pp. 22.

———, *Editor*. Handbook of American Indians North of Mexico. Part 2. Bulletin 30, Bureau of American Ethnology. Washington: Government Printing Office, 1910. $9 \times 5\frac{3}{4}$, pp. 1221, ills.

HRDLÍČKA, ALEŠ. Contribution to the Anthropology of the Central and Smith Sound Eskimo. (Anthropological Papers of the American Museum of Natural History, vol. v, part II.) New York, 1910. $9\frac{1}{2} \times 6\frac{1}{2}$, pp. 175-280, plates IX-XXIII.

HUMPHREY, W. B. North American Indian Folk-Lore Medicine. New York: The American Indian League, [1911]. $10\frac{1}{2} \times 6\frac{1}{2}$, pp. 8, frontispiece, words and music of eight songs.

KROEBER, A. L. Phonetic Constitutents of the Native Languages of California. (University of California Publications in American Archaeology and Ethnology, vol. 10, no. 1.) $10\frac{1}{2} \times 7$, pp. 1-12.

LAUFER, BERTHOLD. Der Roman einer tibetischen Königin, tibetischen Text und Übersetzung. Leipzig: Otto Harrassowitz, 1911. 10×7 , pp. x, 264, 8 text figs.

LEÓN, NICOLAS. La Obstetricia en Mexico. Notas Bibliográficas, Etnicas. Históricas, Documentarias y Críticas, de los orígenes históricos hasta el año 1910, Parts 1 and 2. Mexico: Tip. de la Vda. de F. Dias, 1910. 8×6 , pp. 748, ills.

MACCURDY, GEORGE G. Recent Studies Bearing on the Antiquity of Man in Europe. (From the Smithsonian Report for 1909.) Washington: Government Printing Office, 1910. $9\frac{1}{2} \times 6$, 531-583, plates 1-18, text-figures 1-20.

MACKENZIE, A. S. The Evolution of Literature. New York: Thomas Y. Crowell and Co., [1911]. $8\frac{1}{4} \times 5\frac{1}{2}$, pp. xvi, 440.

MCCINTOCK, WALTER. The Old North Trail. Life, Legends, and Religion of the Blackfeet Indians. London: MacMillan and Co., 1910. $8\frac{1}{2} \times 5\frac{1}{2}$, 95 ills. including 8 in colors.

MOOREHEAD, WARREN K. *The Stone Age in North America. An Archæological Encyclopedia of the Implements, Ornaments, Weapons, Utensils, etc., of the Prehistoric Tribes of North America, with more than Three Hundred Full-page Plates and Four Hundred Figures Illustrating over Four Thousand Different Objects.* Boston and New York: Houghton Mifflin Co., 1910. $9\frac{3}{4} \times 7\frac{1}{4}$, 2 vols., pp. xii, 457; vi, 417; ill. (price \$5.00).

OSBORNE, HENRY F. *The Age of Mammals.* New York: The Macmillan Co., 1910. 9×6 , pp. 635, 220 text figures.

This contains material indispensable to the somatologist, archeologist, and particularly to the student of the antiquity of man in America.

OUTES, FÉLIX F. *Informe sobre la ivª Reunion del Congreso Científico (1º Panamericano).* From La Universidad Nacional de La Plata en el ivº Congreso Científico (1º Panamericano). Buenos Aires: Imprenta de Coni Hermanos, 1909. $10\frac{3}{4} \times 7\frac{1}{4}$, pp. 41-46.

———. *Comunicación Preliminar sobre los Resultados Anthropologicos de mi Primer Viaje á Chile.* From La Universidad Nacional de La Plata en el ivº Congreso Científico (1º Panamericano). Buenos Aires: Imprenta de Coni Hermanos, 1909. $10\frac{3}{4} \times 7\frac{1}{4}$, pp. 216-221.

——— y BRUCH, C. *Los Aborígenes de la República Argentina.* Buenos Aires: Angel Estrada y Cía, 1910. $8 \times 5\frac{1}{2}$, pp. 149, 146 figs.

A brief résumé or text book of the tribes of Argentina, excellent for a general view of the aborigines of this region.

——— y BRUCH, C. *Texto Explicativo de los Coadros Murales "Las Viejas Razas Argentinas."* Buenos Aires: Comp. Sud-Americana de Billetes de Banco, 1910. $7\frac{1}{2} \times 5$, pp. xi, 114.

PARKER, A. C. *Influence of the Iroquois on the History and Archaeology of the Wyoming Valley, Pennsylvania.* (Reprinted from Proceedings of the Wyoming Historical and Geological Society, vol. XI.) 9×6 , pp. 36, ill.

SARG, FRANCIS C. A. *Die Australischen Bumerangs im Städtischen Völker-museums.* Part III, Veröffentlichungen aus dem Städtischen Völkermuseum Frankfurt am Main. Frankfurt am Main: Joseph Baer and Co., 1911. $11\frac{1}{4} \times 8\frac{3}{4}$, pp. 40, 59 figures.

SELIGMANN, C. G. and B. Z. (with a chapter by C. S. MYERS and an appendix by A. MENDIS GUNASEKARA). *The Veddas.* Cambridge: The University Press, 1911. $8\frac{1}{2} \times 5\frac{1}{2}$, pp. 463, 71 plates, 15 text figs. (price \$5.00 net).

SHOOK, C. A. *Cumorah Revisited or "The Book of Mormon" and the Claims of the Mormons Re-examined from the Viewpoint of American Archaeology and Ethnology.* Cincinnati: The Standard Publishing Co., 1910. $5\frac{1}{4} \times 7\frac{1}{2}$, pp. 589, 24 figs.

Written in a more scientific spirit than is usually encountered in works of this kind.

SMITH, HARLAN I. *The Prehistoric Ethnology of a Kentucky Site.* (In Anthropological Papers of the American Museum of Natural History, vol. vi, part ii.) New York, 1910. $9\frac{3}{4} \times 6\frac{1}{2}$, pp. 173-241, plates xvii-lxiv, 1 text figure.

STARR, E. *Cherokees "West" 1794-1839.* Claremore, 1910. 9×6 , pp. 164

SYLVESTER, H. M. *Indian Wars of New England*. Boston, W. B. Clarke Co., 1910. $9\frac{1}{2} \times 6$, 3 vols., pp. 528, 625, 703.

THOMAS, N. W. *Anthropological Report of the Edo-Speaking Peoples of Nigeria*. 2 vols. London: Harrison and Sons., 1910. $8\frac{1}{2} \times 5\frac{1}{4}$, pp. 163, 251, map.

TORDAY, E. *et* JOYCE, T. A. *Notes Ethnographiques sur les peuples communément appelés Bakuba, ainsi que sur les peuplades apparentées—Les Bushongo*. (Annales du Musée du Congo Belge Ethnographie, Anthropologie.—Série III: Documents Ethnographiques concernant les populations du Congo Belge, tome II, fascicule I.) Bruxelles, 1911. $14\frac{1}{2} \times 10\frac{3}{4}$, pp. 1-291, plates I-XXIX, text figs. 1-403, maps.

TORII, R. *Études Anthropologiques. Les Aborigènes de Formose* (1^r Fascicule). (In *Journal of the College of Science, Imperial University of Tokyo*, vol. xxiii, art. 6.) Tokyo: Published by the University, 1910. $10\frac{1}{4} \times 7\frac{3}{4}$, 17 pages of text besides 66 plates and the accompanying explanations.

UHLENBECK, C. C. *Geslachtsen Persoonsnamen der Peigans*. (Overgedrukt uit de Verslagen en Mededeelingen der Koninklijke Akademie van Wetenschappen, Afdeling *Letterkunde*, 4e Reeks, Deel XI.) Amsterdam: Johannes Müller, 1911. $9\frac{1}{4} \times 6$, pp. 26.

VAN GENNEP, A. *Legendes Populaires et Chansons de Geste en Savoie*. Reprint from the *Revue des Idées*, Nov. 15, 1910. $10 \times 6\frac{1}{2}$, pp. 42.

WESTERVELT, W. D. *Maui—The Demi God*. Honolulu: The Hawaiian Gazette, Co., 1910. 9×6 , pp. 182, 19 ills.

A number of magazine articles republished in book form.

WISSLER, CLARK. *The Social Life of the Blackfoot Indians*. (Anthropological Papers of the American Museum of Natural History, vol. VII, part 1.) New York, 1911. $9\frac{1}{2} \times 6\frac{1}{2}$, pp. 1-64, text figs.

YOUNG, B. H. *Prehistoric Men of Kentucky*. Filson Club Publication 25. Louisville, 1910. $12\frac{3}{4} \times 9\frac{1}{2}$, pp. 343, ills.

ANTHROPOLOGIC MISCELLANEA

David Boyle.—In Dr David Boyle, whose death occurred early in February last, Canada has lost her most distinguished archeologist, a man whose career was in some respects quite remarkable. For two years previous to his decease Dr Boyle, as the result of a paralytic stroke, was incapacitated from active pursuit of his profession. At a special Convocation, held at his bedside for the purpose, the University of Toronto conferred upon him the degree of LL.D. in consideration of his services to archeological science.

He was born at Greenock, Renfrewshire, Scotland, May 1, 1842, his ancestry being Ayrshire on the paternal side and Perthshire and Argyleshire (Highland) on the maternal side. What education he received as a boy was obtained at the Mason's Hall School in Greenock, and at the St Andrew's School in Birkenhead (Eng.). His parents came to Canada in 1856, settling in central Ontario, and David was apprenticed to a blacksmith, near the town of Guelph. Later, he qualified as a teacher, and from about 1865 to 1875 was principal of the public school of the town of Elora. During his career as a teacher he held at times various offices, including those of President of the County Teachers' Associations and Chairman of the Public School Section of the Provincial Association of Teachers. While at Elora, his interest in science, particularly geology and archeology, rapidly developed, and he founded in connection with the school a museum which, together with the Elora Mechanics' Institute Library, the origin of which was largely due to his efforts, are local remembrances of his activities. He had the honor of having named after him by Prof. Nicholson, the paleontologist, an important fossil of the Middle Silurian (at Elora), the *Murchisonia Boylei*, in recognition of his geological investigations. Before leaving Elora, he had made an extensive and valuable collection of Indian relics, etc., which he presented to the Canadian Institute, Toronto. This was the beginning of the now famous collection of the Provincial Museum, grown to its present proportions through the labors of Dr Boyle, who from about 1885 to the time of his death held the office of Curator, first under the auspices of the Canadian Institute, and subsequently by appointment of the provincial government.

In 1875 Dr Boyle opened a book-store on Yonge Street, in the city

of Toronto, which soon became the resort of those interested in archeological and related matters, as well as a sort of forum for the discussion of topics educational and other humanly interesting things. The writer of these lines recalls with pleasure many happy hours spent in such wise. The influence of Dr Boyle upon the public opinion of the province in archeological matters ultimately bore fruit, and when he became curator of the modest Museum of the Canadian Institute, the future of archeological science in Ontario was assured. His indefatigable labors in the field, his skill in the arrangement of specimens, etc., his ability in arousing both private and public interest in archeological research, while never receiving anything like a just monetary recompense at any time, were given some chance to demonstrate what could and what ought to be done in the way of collecting and preserving the archeological remains of the country.

Beginning with 1886-1887 (a previous report as curator had been made to the Canadian Institute in 1885-1886), Dr Boyle issued 12 *Annual Archeological Reports*, the last (for 1907) appearing in 1908. His own contributions to these *Reports* consist in the main of descriptions of field-work, notes on specimens added to the museum, etc. Often, as, e. g., in the *Report* for 1903, there are given valuable notes on the Indian's methods of working flints, stone, copper, and bone tools, etc. The "Notes on Specimens" contains a large amount of excellent description, suggestion, etc. A few of the *Reports* are almost entirely devoted to special topics. Thus the *Report* for 1908 is chiefly a valuable and extensive account of Dr Boyle's studies of "The Pagan Iroquois" of Ontario, the most notable single piece of ethnological work undertaken by him, containing, as it does, authoritative data concerning the institutional and folk life of these Indians. The *Report* of 1905,—this feature was suggested by Dr Boas,—is largely made up of ethnological descriptions of the chief stocks of the Canadian aborigines by expert authorities (Boas, Jones, Hill-Tout, Chamberlain, etc.).

In the *Report* for 1900, Dr Boyle discusses "Primitive Art,"—the human form in Indian art as compared with child-art, the human face in clay, etc. In 1895 he published a monograph on *Primitive Man in Ontario*. Interesting items in the *Reports* for 1903 and 1907, respectively, are *verbatim* court-records of the trials of Cree Indians for murder in connection with wendigo-beliefs, etc. Dr Boyle paid special attention to the question of European influences upon American Indian implements, manufactures, etc., and discussed this subject several times (*Reports* for 1887, 1888, 1890, 1906, etc.). He maintained, in the *Report*

for 1903, against the opinion of Mr J. D. McGuire (that the Indians had no pipes but straight ones before the discovery) that several varieties of tobacco-pipes are of Indian origin; and in the *Report* for the same year he opposed the views of Rev. W. M. Beauchamp that the bone combs were of European origin, directly or indirectly. In the *Report* for 1905 he argued in favor of a southern origin of the Iroquoian stock.

In the *Report* for 1900 he points out how much more successful the Indian has been in making the human face in clay than in drawing it; correspondences between the art of the savage and that of the child are also noted. In one of his earlier articles, of which an abstract was published in 1886-1887, Dr Boyle emphasized the persistence of savage traits in the children of civilized races, being one of the first ethnologists to see some of the bearings of such facts.

In 1889 he made a plea for archeology as an aid to the study of history and in the *Report* for 1901 he discussed "The Philosophy of Folk-Lore," and pointed out the condition of the Iroquois of Ontario as offering unique opportunities for the anthropologist and ethnologist.

Dr Boyle represented the Province of Ontario on various occasions, particularly at the great expositions, etc. At the Cincinnati Centennial Exposition of 1888 he had charge of the Ontario mineral exhibit; in 1892 he arranged the Ontario mineral exhibit sent to the Imperial Institute in London, and the great map of the province on exhibition there was planned by him; at the Columbian Exposition of 1893, in Chicago, Dr Boyle prepared the mineral exhibit of the Province of Ontario and had also charge of the archeological collection representing the Provincial Museum. In 1900 he attended the meeting of the British Association for the Advancement of Science, at Bradford. In 1902 he represented the province at the International Congress of Americanists held in the City of New York. From one of the universities in the South he received the honorary degree of Ph.B., which, until the conferring upon him shortly before his death of an LL.D. by the University of Toronto, was his sole academic honor. Outside of his boyhood's schooling he was decidedly a self-educated man. He was a member and long an official of the Canadian Institute, Toronto, and belonged to a number of other scientific organizations. He was a Founder of the American Anthropological Association and a member of its Committee on Publication until his death, also a corresponding member of the Royal Anthropological Institute (London). Dr Boyle was also an honorary member of the Società Italiana di Antropologia. Besides his archeological and ethnological writings, Dr Boyle accomplished a

good deal of literary work in connection with educational matters. He compiled and edited a series of readers for the public schools of Ontario, and contributed many brief articles, etc., to the newspapers. He was also the author of a novel, published anonymously, satirizing certain defects in the school system and injustices in educational life. He had an abiding sense of humor, as the present writer can testify, from an acquaintance, more or less intimate, of many years, and particularly from association with him on such a journey of investigation as that the results of which are recorded in the *Report* for 1890. So characteristic was this sense of humor that not a few of his friends and acquaintances were fain to believe that he was not a Scotchman, but an Irishman, while others settled the matter by calling him a "Scotch-Irishman." He was really proud of his good Scotch ancestry and let his humor thrive and flourish. Under the *nom de plume* of "Andrew McSparkle," he contributed for many years humorous and other articles, in the Scottish dialect, to the *Scottish American* of New York. In 1908 Dr Boyle was awarded the "Cornplanter medal" for Iroquoian research. At the time of his death he was Honorary President of the Canadian Folk-Lore Society. For nine years he was Secretary of the Ontario Historical Society.

Politically, Dr Boyle was an advanced radical and favored universal (including woman's) suffrage. He interested himself in all movements aiming at the betterment of social conditions. Above all, he was thoroughly honest, hating all shams and humbugs. He was very outspoken and feared no man, finding it in consequence somewhat difficult on occasion to remain quite *en rapport* with the powers that were. Both as a scientist and a man he will be much missed. Simple, rugged, honest, hard-working, he was an excellent type of the individual, who, unaided by the polish and traditional scholarship of academic life, forges for himself his scientific fortunes, winning a not inconspicuous niche in the temple of fame.

Dr Boyle married in 1867, his wife being Miss Martha S. Frankland of Bingley, Yorkshire, England. His eldest daughter, Dr Susanna Boyle, the author of a study of the crania in the Provincial Archeological Museum, published in the *Report* for 1891, has been for some years a Professor in the Toronto Women's Medical College.

BIBLIOGRAPHY

In the following list of the published writings of Dr David Boyle, the reports of explorations and investigations, notes on specimens, etc., included in his *Annual Reports*, are not all cited separately, the titles only being given of articles of more or less individual character, with special headings, etc.

1. The Archaeological Outlook. *Proc. Canad. Inst.*, 1886-1887, 3d S., IV, 1-7.
2. The Persistence of Savagery in Civilization. *Ibid.*, 129-131.
3. Report of Curator for 1885-1886. *Ibid.*, 208-210.
- 4-15. Annual Archaeological Reports 1886-1907. Toronto, 1887-1908.
16. Catalogue of Specimens in the Provincial Archaeological Museum. *Ann. Archaeol. Rep.* 1888-1889 [1890], 47-101.
17. Work and Play among the Indians. *School Work and Play*, Toronto. Vol. 1, No. 6, March 15, 1889, p. 6.
18. Indian Archaeology. *The Globe*, Toronto, Vol. XLVI, No. 190, Aug. 9, 1890.
19. Archaeological Remains a Factor in the Study of History. *Trans. Canad. Inst.*, 1890-1891, I, 67-71.
20. Notes on the Discoverer of the Great Falls of Labrador. *Ibid.*, 1891-1892, II, 332-341.
21. Catalogue of Specimens on Exhibition at the Columbian Exposition, Chicago, May 1st to October 31st, 1893, from the Provincial Archaeological Museum of the Canadian Institute, Toronto. *Ann. Archaeol. Rep.*, 1892-1893 [1893], 7-14.
22. Notes on the Life of Dr Joseph Workman. Toronto, 1894.
23. Notes on Primitive Man in Ontario. Toronto, 1895. Pp. vii, 98.
24. The History of Scarborough, 1796-1896. Toronto, 1896.
25. Mounds. *Ann. Archaeol. Rep.* 1896-1897, 14-48.
26. The Philosophy of Woman's Work. *The Globe*, Toronto, July, 1897 [Abstract].
27. The Pagan Iroquois. *Ann. Archaeol. Rep.* 1898, 34-196.
28. Iroquois Medicine Man's Mask. *Ibid.*, 1899 [1900], 27-30.
29. Big Corn Feast (Lower Cayuga), Naming a Child, The Peach Stone Game, The Wake Game, The Invitation Stick, Turtle Clan Names. *Ibid.*, 34-40.
30. The Paganism of the Civilized Iroquois of Ontario. *Journ. Anthropol. Inst.*, Lond., 1900, XXX, 263-274. Also reprinted in *Ann. Archaeol. Rep.*, 1901 [1902], pp. 115-124.
31. Primitive Art. *Ann. Archaeol. Rep.* 1900 (1901), 11-24.
32. The Philosophy of Folk-Lore. *Ibid.*, 12-131.
33. Indian Society of False Faces. *The Papoose*, N. Y., 1903, I, 1-10. Reprinted from *Ann. Archaeol. Rep.* 1898.
34. Who made the Effigy Stone Pipes? *Ibid.*, 1903-1904, 27-3.
35. The Working of Native Copper. *Ibid.*, 36-43.
36. Working Methods. *Ibid.*, 48-80.
37. Who Made the Bone Combs? *Ibid.*, 80-85.
38. The Killing of Moostoos the Wehtigoo. *Ibid.*, 126-133.
39. Jean François Albert du Pouget, Marquis de Nadaillac. *Ibid.*, 1904 [1905], 113-117.
40. Canadian Indians in 1904. *Man*, London, 1900, v, 55-58.
41. The Making of a Cayuga Chief, etc. *Ann. Archaeol. Rep.* 1905 [1906], 57-59.

42. European Contact and the Introduction of Disease among the Indians. *Ibid.*, 59-65.
43. John McLean and Fr. Morice's "History of the Northern Interior of British Columbia." *Ibid.*, 65-68.
44. The Iroquois. *Ibid.*, 146-158.
45. Review. *Ibid.*, 1907 [1908], 12-19.
46. The Killing of Wa-sak-apce-quay by Pe-se-quan and others. *Ibid.*, 91-121.

ALEXANDER F. CHAMBERLAIN.

A Key to the Navaho Orthography Employed by the Franciscan Fathers.

—In glancing through Dr Goddard's recent review¹ of the accurate and important Ethnologic Dictionary of the Navaho Language published last year by the Franciscan Fathers of St Michaels, Arizona,² I was disappointed in not finding a key of some sort which would give the equivalents of the peculiar letter-values adopted by the Fathers in more standard phonetic symbolism, that is, in a symbolism which has been adopted by great European phoneticians. The Fathers have nowhere in the Dictionary tabulated or systematized the Navaho sounds, nor have they described their manner of production in scientific language. Linguists and ethnologists are everywhere feeling the need of a standardizing key to the Fathers' orthography.

Although a mere beginner in the study of Navaho, I have been so bold as to work out the accompanying table of equivalents in the hope that until it is superseded by a similar key such as our authority on Athapaskan phonetics, Dr Goddard, could prepare, it will be of service to students. I would suggest that those interested cut it out and paste it in their copies of the Ethnologic Dictionary, and that the Fathers examine it and accept such letter-values as they deem good, for use in their future publications, thereby making the orthography of the Navaho language more nearly correspond to that in which the other languages of the Southwest are being recorded. I am merely trying to assist students and to aid the Fathers in their praise-worthy work.

One will find, given below, all of the symbols employed by the Fathers. Each of these symbols is followed by an English or German word which contains a similar sound or by some other explanation as given by the Fathers, in parenthesis; and each is also accompanied by an equivalent symbol suggested by me, in brackets.

¹ Pliny Earle Goddard, *American Anthropologist*, Vol. 12, No. 2, April-June, 1910, pp. 311-315.

² The Franciscan Fathers, *An Ethnologic Dictionary of the Navaho Language*, St. Michaels, Arizona, 1910.

I. ORINASAL VOWELS

\hat{x} (băt, very short, but orinasal) [\hat{x}]; \hat{e} (dëbt, very short, but orinasal) [\hat{e}]; \hat{i} (pîn, very short, but orinasal) [\hat{i}]; \hat{a} (ărt, very short, but orinasal) [\hat{a}]; \hat{o} (dõne, very short, but orinasal) [\hat{o}]; \hat{u} (pull, very short, but orinasal) [\hat{u}]; \tilde{x} (bād, long, but orinasal) [\tilde{x}]; \tilde{e} (dāte, long, but orinasal) [\tilde{e}]; \tilde{i} (pīque, long, but orinasal) [\tilde{i}]; \tilde{a} (fār, long, but orinasal) [\tilde{a}]; \tilde{o} (nōte, long, but orinasal) [\tilde{o}]; \tilde{u} pōōl, long, but orinasal) [\tilde{u}].

2. ORAL VOWELS

ǣ (bǣt, very short) [æ̃]; ĕ (dĕbt, very short) [ĕ̃]; ĭ (pĭn, very short) [ĭ̃];
 ǣ (ǣrt, very short) [ǣ̃]; ȝ (done, very short) [ȝ̃]; ŭ (pŭll, very short) [ŭ̃]; æ
 (bat, medium long?) [a]; e (debt, medium long?) [e]; i (pin, medium long?)
 [i]; a (art, medium long?) [a]; o (done, medium long?) [o]; u (pull, medium
 long?) [u]; ā (bād, long) [ā̃]; ē (dāte, long) [ē̃]; ī (pīque, long) [ī̃]; ā (fār,
 long) [ā̃]; ō (nōte, long) [ō̃]; ū (pōōl, long) [ū̃].

3. CONSONANTAL VOWELS

y (yield) [j]; w (will) [w].

4. LARYNX CONSONANTS

h (hemp) [h]; ⁴ ("a fairly guttural exhalation which at times is equivalent to *h*, and even *q*. Frequently this sound has been rendered with *h*") [^h or *h*]; ⁵ ("abrupt close of the vowel," i. e., complete glottal stop) [ʔ]; ¹ ("hiatus preceding a vowel," i. e., light glottal stop) [ʰ].

5. BACK OF TONGUE CONSONANTS

g (gig) [g]; k' (clicked k) [k']; k, or kh, or kq (ken) [k^h or kh]; gh ("a guttural g to which the rolling sound of r is added," i. e., open g) [q or R]; q (German lachen) [x].

6. FRONT OF TONGUE CONSONANTS

d (den) [d]; *t'* (clicked t) [t']; *tq* [*t^h* or *th*]; *z* (zone) [z]; *s* (sit) [s]; *zh* (azure) [ʒ]; *sh* (shall) [ʃ]; *l* (like) [l]; *ɛ* ("strongly aspirated l," i. e., voiceless l) [l]; *dz* (adze) [dz]; *ts'* (clicked *ts*) [ts']; *ts*, or *tsq*, or *ds* (pretzel) [*t^h* or *tsh*]; *j* (judge) [dʒ]; *ch'* (clicked *ch*) [ts']; *ch*, or *chq* (church) [*t^h* or *tʃh*]; *dʒ* [dʒ]; *tt'* [t']; *tt* [*t^h* or *tlh*]; *n* (man) [n].

7. FRONT OF TONGUE SOUNDS

b (been) [*b*]; *m* (man) [*m*].

As additional sounds recorded by the Fathers we ought to mention *n̄* ('indicates an accented n,' i. e., a syllabic n) [*n̄*, or *n̄*']; *'n* ('sound of dn, as

in dnieper." i. e., n preceded either by glottal stop or opening of nose passage by lowering velum) [^hn, or ^hn, or ^hn]; kw (quick) [kw]; wh (ghw) [qw]; qu (when) [xw].

It appears from the text of the Dictionary that the Fathers distinguish three lengths of oral vowels but only two lengths of orinasal vowels, although a definite statement to this effect is nowhere to be found.

The writer cannot agree with Dr Goddard when he says in the recent review¹ that the Fathers' "treatment of nasalized vowels seems happy." The use of circumflexes and tildes over vowel characters to indicate different combinations of length and nasalization seems to me very unhappy, illogical, and confusing. They indicate only two lengths. How would they have indicated three lengths? By using circumflexes, tildes, and some other diacritical marks? Would they use as many varieties of mark as they distinguish lengths? And if they abandon this principle, placing, say, the tilde over every nasalized vowel, and yet retain their system of indicating length and stress of unnasalized vowels, and apply that system to the nasalized vowels also, some of their vowel characters will have three diacriticals piled up above them. And as it is, the combinations of vowel character plus tilde plus acute accent are with such difficulty distinguishable from the combinations of vowel character plus macron plus acute accent that the eyes are continually strained. Professor Brugmann and other foremost linguists settled the question as to writing nasalization several years ago, adopting the Polish method of placing a hook open to the right under a letter. Examine the usage in the standard *Grundris der vergleichenden Grammatik der indogermanischen Sprachen* by Brugmann and Delbrück. An exposition of the reasons why the subscript hook is the best method of writing nasalization would cover several pages, and would here be out of place. May I add only that the use of superior n (^hn) after a vowel has little or nothing to recommend it; it is illogical, sprawls the word in an ungainly fashion, and pure nasalization of vowels such as we have in many Indian languages has nothing more to do with n than with m or "ng".

I differ from Dr Goddard in the opinion that "probably a strict alphabetical arrangement would have been more available." This is a book to read, page after page. In logical sequence it introduces us to the whole Navaho universe. The book is provided with an excellent and complete alphabetically arranged English index. An index of Navaho words might well be added. Should the Navaho words in such an index be arranged in the Roman alphabetical order, or in an order more scientific and yet very readily learned?

JOHN P. HARRINGTON.

¹ Goddard, loc. cit., p. 314.

The Numerals "Two" and "Three" in Certain Indian Languages of the Southwest.—

LANGUAGE	RECORDER	"TWO"	"THREE"
Tepehuan	Charencey	gaok	baech
Tarahumare	Charencey	oka	baica
Cora	Conant	huapoa	huaeica
Cahita	Pimentel	uoi	vahi
Opata	Pimentel	gode	vaide
Pima	Charencey	houak	vaik
Seri	McGee	ghá'kum	pháum
Cochimi	Gabb	kūak	kabiak
Kiliwi	Gabb	hhu-ak	hhamiak
Cocopa	Harrington	ha-wö'k ^a	ha-mók ^a
Diegueno	Harrington	ha-wö'k ^a	ha-mók ^a
Maricopa	Harrington	ha-vík ^a	ha-mók ^a
Yuma	Harrington	ha-vík ^a	ha-mók ^a
Mohave	Harrington	ha-vík ^a	ha-mók ^a
Yavapai	Freire-Marreco	uak ^a	muk ^a
Tonto	Loew and White	uake	moke
Walapai	Harrington	ha-wák ^a	ha-mók ^a
Havasupai	Harrington	ha-wö'k ^a	ha-mók ^a
Ute	Harrington	wáijüini	páijüini
Paiute	Gatschet	vay	pay
Chemehuevi	Harrington	wai	pai
Pavant	Gatschet	wyune	piune
Shoshone	Gatschet	waii	pahi
Comanche	Charencey	waha	pahu
Hopi	Harrington	léjō' ^o	pájo' ^o
Kern River	McGee	wo	pai
San Luis Rey	Gatschet	whii	paa
Kauvuya	Gatschet	vuy	pa
Gaitchain	Gatschet	vue	pahe
Cahuilla	Conant	mewi	mepai
Taos	Harrington	wiina	pajüä
Isleta	Harrington	wisi	patso
Isleta del Sur	Harrington	wisi	patso
Piro	Bartlett	wi-yú	môn-tu
Jemez	Harrington	wiŷ	ta ¹

¹ Is the Jemez numeral for three borrowed from the Navaho language?

Tewa	Harrington	wije	poje
Kiowa	Mooney	yí'a	päo

JOHN P. HARRINGTON.

Activities of the Anthropological Department of the Field Museum of Natural History.—Dr Dorsey is at present in the Orient, on leave of absence, preparing a series of articles on sociology and ethnology. He is expected to return in about one year.

Dr Berthold Laufer has carried on for the period of three years ethnological investigations in Sikkim and Eastern Tibet and archeological researches in China, with an endowment furnished by Mrs T. B. Blackstone of Chicago. He spent a year and a half among Tibetan tribes and advanced as far as Chamdo where he was officially stopped and sent back by order of the Chinese government. He has secured new and important linguistic material in the shape of records of two Tibetan dialects of considerable antiquity which will throw fresh light on the development of Indo-Chinese languages, and a great bulk of material relating to the rites, mythology, monastic institutions, religious dances, art, and history of Lamaism. The Chinese collections illustrate all phases of cultural development in ancient China as expressed in bronze, pottery, iron, jade, painting, etc.; a collection of over 400 Buddhist stone sculptures, tomb-inscriptions, and other inscription tablets ranging from the fourth to the eighth century, and a collection of archaic and medieval mortuary clay figures are probably unique. The total number of specimens secured amounts to over ten thousand. Dr Laufer will work up his results in a series of monographs. He is at present engaged in describing the burial rites of ancient China in connection with a collection of mortuary jade carvings. Incidentally, he has brought together for the Newberry and Crerar libraries an East-Asiatic library comprising 28,000 volumes of Chinese, Japanese, Tibetan, Mongol, and Manchu books, among which are complete copies of the Kanjur and Tanjur, and many rare early and unique prints.

Dr A. B. Lewis has been in New Guinea since the summer of 1909. The first few months of his stay were used visiting coast and interior villages between Humboldt Bay and Angriff's Hafen, German New Guinea. Later, using Eitapé as a base, he made extensive collections in that neighborhood and in the Alii, Seleu, Angel, and Tumelo islands. Sattelberg, a Papuan settlement in the mountains of the interior, was visited and a valuable collection obtained, also one from the Hube, a cannibal

tribe of the interior. Again returning to the coast Dr Lewis proceeded to Potsdam Hafen and the Kaiserin Augusta River; then to New Britain and the Solomon Islands. He has made a careful study of the culture of several regions, has an excellent collection and many photographs.

Mr F. C. Cole returned to the Philippines in the fall of 1909, and, after a short stay with the Negritos of Bataan, proceeded to North Central Mindanao, where he spent seven months studying the Bukidnon. He penetrated into the interior until within fifty miles from the Gulf of Davao, on the south, then returned to the coast and continued the work from the Davao side. After spending seven months in that region he began investigations among the Mandayas of the East Coast of Mindanao, but after only a month's stay was stricken with malignant malarial fever which made his return to the States imperative. The collection gathered on this trip numbers 2500 pieces and fully represents every phase of the daily life of the tribes visited. In addition he gathered many folk tales, over five hundred physical measurements, and twelve hundred photographs. This material is now being catalogued and prepared for installation. Before returning to the Orient Mr Cole will publish the results of his two Philippine trips in a series of monographs.

Mr Charles Owen is at present among the Hopi, for the purpose of filling in certain breaks in the museum collection. Upon the completion of this task he will carry on archeological investigations in the Southwest during the fall and winter.

Mr H. R. Voth is engaged in preparing a complete set of sand mosaics of the Hopi, for installation in the new museum building.

Modeling of miniature and life-size groups is being pushed forward under the direction of Mr C. A. Gardner. Two Philippine groups have been recently placed on exhibition and a third is rapidly taking shape.

Assistant Curator Simms is looking after the upkeep of the division, and under his direction the entire department is being relabelled and considerable new installation is being carried on. It is the intention to have all material installed and fully labelled before it is moved into the new quarters.

Fate of the New York State Collections in Archeology and Ethnology in the Capitol Fire.—In the New York State Capitol conflagration of March 29 the archeological and ethnological collections of the State Museum were almost totally destroyed by fire and water. The collections were installed in vertical wall and square alcove cases about the corridors at the head of the western staircase. The location seemed to

insure singular protection from fire, there being nothing inflammable in the vicinity save the molding that held the cases together. The damage seems to have been done by the long sheets of flame that burst through from the large corridor windows of the library bindery on one side and of the Education Department offices on the other. The immense amount of inflammable material there fed the flames once established and the draft caused by the breaking of the heavy plate windows that opened out into the hall about the staircase carried the blast directly against the cases, shattering the glass and exposing the specimens within. The archeological cases suffered most from breakage brought about by the crumbling of the sandstone ceilings that had been subjected to the intense heat. The falling of the ceilings in great blocks broke the shelves that had so far resisted the fire and spilled the specimens into the water and débris. The continual dropping of masses of cracked rock from the walls made work of rescuing valuable objects most hazardous. However, despite the choking smoke, the sudden blasts of heat, and the falling walls the majority of the more valuable articles, untouched by the fire, were carried to safety.

The ethnological exhibits consisted principally of three large collections; one made by Lewis H. Morgan before 1854 and embracing some 200 objects, the Harriet Maxwell Converse collection of about 350 specimens, and the collection made by Arthur C. Parker embracing nearly 200 rare objects, exclusive of silver ornaments. The famous Morgan collection of old Iroquois textiles and decorated fabrics went up in the first blast of flame, and the cases were burned to their bases. About 50 Morgan specimens were in the office of the archeologist of the museum for study purposes, and fortunately have been preserved. The Converse collection of silver articles was rescued intact.

Many of the less inflammable objects were rescued during the fire and carried out of the danger zone. None of the wampum belts of the Six Nations was injured.

One of the odd features of the calamity was that hardly a single object connected with the ceremonies of the Iroquois totemic cults or the religious rites was injured. The hair of the 30 medicine masks that hung in a line across the westernmost cases was not even singed.

Of the 10,000 articles on exhibition, including about 3500 flints, only 512 have been identified by their catalog numbers. One thousand other articles, more or less ruined by the action of flame and water, will entail a great deal of work to identify. In this connection it is interesting to note that catalog numbers applied directly to the surface of the stone,

bone, or clay specimen with waterproof ink, withstood the action of fire and water better than the numbers painted on white varnish or on paper labels. Even when the object had been considerably heated the ink number on the surface was still legible. Paper labels proved valueless especially those with typewritten numbers. Those with numbers written in waterproof ink came through better.

ARTHUR C. PARKER.

On the Future of the Independent Mode in Fox.—The future forms of the independent mode in Fox have *nī* and *kī* as prefixes in place of *ne* and *ke* respectively; the third person, singular and plural, as subject has a "prefix" *wī* but also the usual suffixes. Thus *nī'py^a* I shall come, *ne'py^a* I come, I came; *kīwī'pumen^e* I shall eat with you, *ketepānen^e* I am found of you; *wīnesāw^a* he will slay him, *wī'pyāw^a* he will come, *nesāw^a* he slays him, *pyāw^a* he comes, he came. See § 35.2 in the Algonquian section of the Handbook of American Indian Languages; § 28 is not clear on this point. It cannot be doubted that the *wī* of the third person is identical with the *wī* of the future conjunctive, and interrogative where it occurs as a "prefix" in all persons. The cases where it is found in the imperative are really identical with the future conjunctive. Under certain conditions this *wī* is used in the subjunctive quite irrespective of what person is the subject.

The forms with *nī*- and *kī*- are the ones that I wish to examine. Now since *wī* is not restricted to any particular person in other modes, it becomes pertinent to ask why it apparently is limited to the third person as subject in the independent mode. In short why do we not find in Fox such forms as **nēwī'py^a* I shall come, **kewī'py^a* you will come, **kewī'pumen^e* I shall eat with you, etc.? Because the sequence *-ewī-* is absolutely foreign to the Fox language.¹ I surmise that forms such as *nī'py^a*, etc., are contractions for **nēwī'py^a*, etc. That this is the case is clearly indicated by Cree. Compare *newesakehow* I wish to love him (Horden, p. 34; phonetically *nēwīsagihāw^a?*), the analysis of which is *ne—ow*, I—him; *we*; *sake*, initial stem; *-h-*, instrumental particle.

Another point is to be considered. The *we* of *newesakehow* occupies the same position as *ke* in *neketotumowow* I have done it for him (phonetically *nekitot-ama-wāw^a?*), the analysis of which is *ne—ow*, I—him; *ke* initial stem meaning completion; *tot* for *totā* to do (transitive); *-umow-* = *ama-w* in the Fox double object series. Now *ke* (Fox *kī*, *kīcī*) is an initial stem; therefore *we* (Fox *wī*) should also be considered one too, and not a prefix;

¹ At any rate it does not seem to occur in the published texts.

for the reason that, so far as we know, the only thing that can come between the personal prefixes and the initial stem in Algonquian is the vexatious intervocalic, a single consonant which is either purely phonetic, or, as I think, more probably a morphological element.

I gather from Dr Gatschet's notes that in Shawnee there was the same phenomenon as in Fox *nī'pya*, etc., but am not positive.

Now, if *wī* is an initial stem, there is a strong presumption that the temporal prefix *ā* (used in identically the same subordinate modes as *wī*) is also one. From Dr Gatschet's notes it is clear that the Peoria correspondent was not necessarily attached to the verbal complex but could stand alone independently, which confirms this belief.

TRUMAN MICHELSON.

A Rare Missouri Flint.—The flint, of which a cut is shown in Fig. 20, was found by John Vaughn in 1891 about one and a half miles east of Elsberry, Lincoln County, Missouri. It was plowed up, in turning ground for corn, in flat bottom land, about one fourth of a mile from the bank of the Mississippi River and three fourths of a mile east of King's Lake.

For over ten years prior to my obtaining the flint it was in the possession of Mr. C. C. Eastin of Elsberry, Mo.

The flint is evidently a ceremonial knife, its extreme thinness rendering other use improbable. It measures $12\frac{5}{8}$ inches long, 3 inches wide, and the greatest thickness, at juncture of blade and base is but $\frac{3}{8}$ inch. The greater part of the blade is less than $\frac{1}{4}$ inch thick and delicate chipping renders the edges keen and even.

As shown in the cut, the specimen has a slender stem base, evidently intended as a

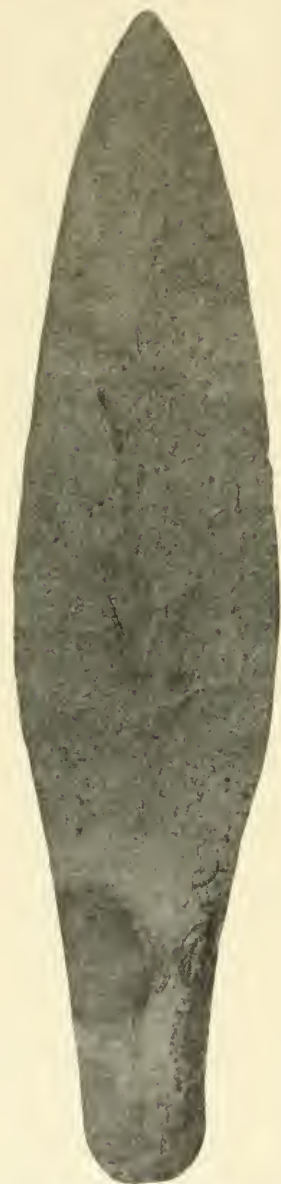


FIG. 20.—A rare flint found near Elsberry, Mo.

handle, which expands into a beautiful, leaf-shaped blade. It is of a delicate lavender flecked with dark spots and showing numerous cream-white and red striations. In many places the blade shows thin flakes to have carried its entire width.

The specimen is a master-piece of the ancient flint workers' art and fascinates the eye by its graceful outline, beautiful color, and magnificent workmanship.

WILLIAM CLARK BARNARD.

Edward Palmer.—Dr Edward Palmer, for more than two generations an assiduous collector in ethnology and natural history, died on April 10, 1911. His work was confined principally to the Southwestern United States and Mexico, although during his long period of service he gleaned in many fields. The value of his collections lies in the early period of their acquisition and the care with which the data and the method of procuring them were recorded.

Dr Palmer made the first exploration of an ancient pueblo ruin, in 1873, a mound at St George, Utah, which he thoroughly searched, preserving every fragment of evidence that came under his trowel and carrying out the exploration with a skill and perfection of method that have not been surpassed in that field. This work was followed by archeological excavations on the lower Verde River in Arizona. His connection with the United States army in the west as Assistant Surgeon took him among the wilder tribes of the frontier and at this period he collected some of the most unique specimens ever obtained from the Apache.

Many branches of biology are indebted to Dr Palmer for first class material and the number of new species that rewarded his zeal is surprising. His ethnological material, to which he constantly added, is accounted among the most valuable in the United States National Museum.

Except in the earlier years, he did not publish his researches, being satisfied with the rewards of a diligent collector, who does his part well in adding to the stores of science.

WALTER HOUGH.

The Origin of the Names Ute and Paiute.—In the Ute-Paiute language no words closely resembling Spanish Yuta, English Ute, or Spanish Payuche, English Paiute, either in sound or application, occur. Talk about Paiute meaning "water Ute" or "true Ute" is nonsense, because no such form as "Ute" occurs in the language. I believe that the origin of the word Yuta, Ute, is *nutš ī*, plural *nutš ī u*, meaning "person, people," in all the dialects. And Payuche, Paiute, is probably a corruption of

paquatšī, plural paquatšīu, Ouray Ute Indian. The Ouray Ute live out west of the Ute bands with whom the Spaniards would have first come in contact when going up the Rio Grande drainage. In the Ute forms given above q is pronounced as a soft open fricative continuant g and the italicized letters are pronounced without voice.

JOHN P. HARRINGTON.

THE following announcement is made by the management of the School of American Archaeology:

"The summer field session for 1911 of the School of American Archaeology, of the Archaeological Institute of America, will be held at El Rito de los Frijoles, near Santa Fé, New Mexico.

"Facilities will be given students to observe or to participate in the excavations, begun in 1908, and now in progress at Tyuonyi, near-by talus pueblos and cliff-dwellings. Excursions will be made to facilitate a study of botanical and other environmental conditions of the tribes dwelling in the vicinity. During August, lectures will be given on the distribution and culture of the tribes in the Southwestern section of the United States; on the evolution of design as shown in ancient Pueblo art; on the native languages, and methods of recording them. A course will be given by Dr Lewis B. Paton, formerly Director of the American School in Jerusalem of the Archaeological Institute of America, on "The Ancient Semites" to afford an opportunity of a comparative study of cultures developed in semi-arid regions in the Eastern and in the Western continents. Other lectures for comparative studies are being arranged for.

"The object of the annual summer field session of the School of American Archaeology is to bring together persons interested in the study of anthropology, for first-hand investigation and discussion, and to give students the opportunity for field work needed to supplement university instruction. The attention of teachers and students engaged in the scientific study of education is also called to the advantages of this work. At the close of the session opportunity will be given to visit the pueblos of Taos and Acoma, and the Government excavations among the cliff-dwellings in the Mesa Verde National Park, Colorado.

"For details of the Summer Session, address *Director of the School of American Archaeology*, Santa Fé, New Mexico."

THE second Central American Expedition of the School of American Archaeology reached Guatemala on January 14 and steps were immediately taken to continue the work inaugurated the preceding year. After a

preliminary survey of the southern Maya field year (January, 1910), it was decided that the School of American Archæology would undertake the excavation and repair of the ruins of Quirigua in the Department of Izabal, some fifty miles from the Atlantic coast. During the first expedition the ruins were surveyed, and a park laid out surrounding them. The Great Plaza was cleared of underbrush and the monuments were cleaned, photographed, and measured. A first hand study of the art and inscriptions was undertaken and in both cases the inadequacy of photographs and casts for definitive conclusions was demonstrated. The second expedition will continue the work from this point. The luxuriant tropical vegetation in which the ruins lie buried will be felled and means taken to prevent the annual reappearance of this destructive agent. The laying bare of this site, the clearing of the various pyramids, courts, and temples will doubtless be the main work of the present season, though excavations will also be made and the study of the art and inscriptions be continued.

ACCORDING to the 1909-1910 report of the Peabody Museum of American Archæology and Ethnology, the following expeditions were in the field during 1909-1910 and projected for 1910-1911:

1. The Museum Expedition to Central America in charge of Dr A. M. Tozzer. Important information was obtained at the ruined city of Tikal and at three other cities in the Department of Peten, Guatemala, two of which have not before been recorded.

2. An Expedition for the season 1910-1911 under the direction of Mr R. E. Merwin, Fellow in Central American Archæology, has taken the field to continue the researches at one of these prehistoric cities.

3. The income of the H. C. Warren fund was used in part in aiding an exploration in Newfoundland by Mr A. V. Kidder, and in part in continuing explorations in the Delaware Valley by Mr E. Volk.

MR C. M. BARBEAU, Assistant in Anthropology of the Geological Survey of Canada, spent about six weeks of April and May at Lorette, Province of Quebec, in ethnologic research among the French-speaking Huron. Despite the fact that these Huron have long been under Canadian French and Catholic influence and have given up the use of their native speech, Mr Barbeau was successful in gathering much of ethnologic interest, particularly in regard to their material culture and songs; about 65 Indian songs in native text were recorded on the phonograph. Mr Barbeau will continue his Huron-Wyandot work among the scattered Wyandot of southern Ontario, and the Wyandot of Quapaw Agency, Oklahoma.

Nature states that the British Museum has acquired, at an almost nominal price, the valuable collection of specimens illustrating the religion of Polynesia, which was long in the possession of the London Mission Society. Many of the specimens are unique, and it would now be quite impossible to form such a collection. Among the most remarkable objects are the great tapering idol of the national god of Raratonga, kept swathed in blue and white matting; Tangaroa, "the supreme god of Polynesia," a wooden figure with small human-like objects sprouting from his eyes, mouth, and other parts of his body, typifying his creative power; and a head-dress of black feathers, which completes a mourning costume already owned by the museum.

On October 15, 1910, the entire establishment of Rev. A. G. Morice, well known to anthropologists as the foremost authority on the Athapascan languages of the northwest, was destroyed by fire. Father Morice had been called to Duck Lake, Saskatchewan, shortly before to start a newspaper, and everything was progressing well when the disaster happened. Besides his library and collection of rare and important Canadiana a monumental dictionary of the Carrier language soon to be published was also lost.

THE Fifth General Congress of the German and Viennese Anthropological Society will meet together with the 42d Congress of the German Anthropological Society at Heilbronn, Wurtemberg, August 6-9, 1911. There will be an anthropometrical Conference at Heilbronn and a paleo-ethnological Conference at Tübingen. Prof. von Luschan will be chairman of the section on Physical Anthropology; Prof. von den Steinen of the section on Ethnology and Prof. Seger of that on Archeology.

An address on "The Evolution of Human Teeth and their Racial Differences," was delivered by Dr A. Hrdlička, of the Smithsonian Institution, on June 1, at Toronto, under the auspices of the Ontario Dental Society, and on June 27 before the Alumni of the dental department of the University of Buffalo. On May 25 a similar address was given by Dr Hrdlička before the Maryland State Dental Association, at Baltimore.

DUCHESS M. D. TENIŠEVA has donated her entire important museum in Smolensk to the Archeological Institute of Moscow. The museum, which is located and will remain in Smolensk, is very rich in archeological, and ethnological collections from Siberia, particularly from the Smolensk region. Several years ago a part of the collections was exhibited temporarily in the Louvre in Paris.

At a joint meeting of the American Ethnological Society and the section of Anthropology and Psychology of the N. Y. Academy of Sciences on March 27, 1911, Dr Paul R. Radosavljevich read a paper on "Cephalic Indices in Relation to Sex, Age, and Social Conditions"; and Prof. Franz Boas read a paper entitled "Notes on the Indian Tribes of Mexico."

PROF. E. SELER in his inaugural address at the opening of the International School of American Archæology and Ethnology, delivered in Mexico City on January 20, spoke on the "Basis and Object of Archæological Research in Mexico and Adjoining Countries." This address has been published in *Science*.

THE Seventh Congrès Préhistorique de France will be held at Nîmes. The following places of archæological interest will be visited: Vaunage, Uzès, and Arles. The following questions will be discussed at length: The Neolithic Age in Provence; The Castellaras; The Copper and Bronze Age in Gard.

DR R. H. LOWIE of the American Museum of Natural History, New York City, will spend the summer among the Crow, Hidatsa, and Mandan. Dr P. E. Goddard of the same institution will visit the Sarcee, the Onion Lake Chipewyan, and the Cree in the vicinity of Battleford, Saskatchewan.

ON May 3, 1911, at a joint meeting of the Medical Society of the District of Columbia and the Anthropological Society of Washington, Dr A. Hrdlička and Dr D. S. Lamb read papers on the diseases and injuries of the preColumbian inhabitants of the Western Hemisphere.

SINCE January 1, 1911, the Sarawak Museum has been publishing a Journal for the purpose of promoting scientific knowledge of the natives and natural history of Borneo. The first issue contains a large number of articles on the folklore, linguistics, and ethnology of Sarawak.

MR JAMES MOONEY of the Bureau of American Ethnology is engaged in investigations among the Cherokee of North Carolina; Dr Truman Michelson will spend the summer with the Fox Indians and the Shawnee; and Dr Paul Radin will continue his Winnebago reseaches.

REV. STEPHEN D. PEET has resigned the active editorship of the *American Antiquarian and Oriental Journal* and has been succeeded by J. O. Kinnaman, the place of publication being changed at the same time from Salem, Mass., to Benton Harbor, Michigan.

THE Annual Meeting of the Anthropological Society of Washington was held on April 18, and the following officers elected for the ensuing

year: President, F. W. Hodge; Vice-President, John R. Swanton; Secretary, Truman Michelson; Treasurer, J. N. B. Hewitt.

MR J. ALDEN MASON has had conferred upon him the degree of Ph.D. in Anthropology from the University of California, his dissertation, which will soon be published by the university, being a study of the ethnology of the Salinan linguistic family.

THE last number of the Museum Journal of the University of Pennsylvania contains a description of the temple of Philae and an account of "A Trip to Chichen Itza" by Dr G. B. Gordon, and "A Visit to the Penobscot Indians" by Dr Frank G. Speck.

DR PAUL R. RADOSAVLJEVICH, a former student of Prof. Rudolf Martin, at present instructor in experimental pedagogy at New York University, is preparing to give a course on physical anthropology at the latter institution in the near future.

AN expedition to southeast Arabia has been planned by the Danish Royal Geographical Society, the object being the mapping of parts of Oman and the studying of the ancient memorials and commercial prospects of the country.

PROF. R. MARTIN, for many years head of the Anthropological Institute of Zurich, has resigned his position, due to persistent ill health. His place, it is reported, will be filled by Dr Schlaginhaufen from the museum in Dresden.

THE number of the Museum Journal of the University of Pennsylvania for December, 1910, contains interesting notes by F. G. Speck and M. R. Harrington on a Malisit myth and the customs of the Delaware Indians, respectively.

A STATUE to Captain Cook will be placed on the Mall side of the Admiralty arch, on the right hand going towards Charing Cross, London. The execution of the statue has been entrusted to Sir Thomas Brock.

THE first universal Races Congress is to take place at the University of London, July 26-29, 1911. Prof. von Luschan of Berlin University will deliver a lecture on the "Anthropological View of Race."

MR A. D. DARBISHIRE has been appointed to the newly instituted lectureship in genetics, at the University of Edinburgh, and will deliver a course of six lectures on heredity during the summer session.

REV. A. G. MORICE, of Duck Creek, Saskatchewan, has been appointed lecturer in anthropology in the University of Saskatchewan and next winter will give a series of five lectures at the University.

THE library of the late German philologist, Prof. Franz Nikolaus Finck, has been purchased by the Hon. Frank Springer for the use of the School of American Archæology at Santa Fé, New Mexico.

DR J. WALTER FEWKES has returned to Washington from an archeological investigation, on behalf of the Bureau of American Ethnology, of the Isle of Pines and the western end of the island of Cuba.

A bill has been introduced into the House of Representatives at Washington "To establish in the District of Columbia a laboratory for the study of the criminal, pauper, and defective classes."

ALPHONSE LOUIS PINART, noted for his philological investigations among American tribes, particularly those of Mexico, died at Boulogne (Seine) on February 13, at the age of fifty-nine years.

DR MAX UHLE, of the National Museum of Archeology of Peru, will spend two months exploring the ruins of Choqquequirau and one month at Cuzco, during the present field season.

DR A. TOZZER of Harvard University and Dr Aleš Hrdlička of the U. S. National Museum have been elected corresponding members of the Société des Américanistes de Paris.

ON April 18, Professor Franz Boas read a paper before the National Academy of Sciences, Washington, D. C., on "Changes in Bodily Form of Descendants of Immigrants."

PROFESSOR EDUARD SELER, of Berlin, on leave of absence in Mexico, has discovered a set of ancient paintings on the walls of one of the apartments of the Palenque Palace.

AT the 453d regular meeting of the Anthropological Society of Washington, Prof. R. B. Dixon of Harvard University read a paper on "Polynesian Mythology."

DR JOHN C. BRANNER, of Stanford University, is the head of a scientific expedition to the coast of Brazil, which sailed from New York on April 18 for Para.

AN important discovery in regard to the existence of man in early Pleistocene or Pliocene strata has been made by the Marquis of Cerralbo in Spain.

MRS M. C. STEVENSON of the Bureau of American Ethnology has left Washington to resume her studies among the Pueblo Indians of New Mexico.

PROFESSOR A. F. CHAMBERLAIN of Clark University has been elected a corresponding member of the Société des Américanistes de Paris.

DR A. B. MEYER, former Director of the Royal Zoological and Anthropologic-Ethnographical Museum at Dresden, Germany, died on Feb. 5.

THE residue under Sir Francis Galton's will is bequeathed to the University of London for the encouragement of the study of eugenics.

DR E. HUNTINGTON of Yale University is at present engaged in explorations among the cliff dwellings of New Mexico.

BY vote of the Corporation of Yale University Dr G. G. MacCurdy has been appointed Assistant Professor of Archæology.

REV. ISAAC BEARFOOT, translator of many religious works into the Iroquois languages, died April 2.

QUANAH PARKER, the noted chief of the Comanche Indians, died on February 23.

American Anthropological Association

OFFICERS AND MEMBERS¹

1911

OFFICERS

PRESIDENT, DR J. WALTER FEWKES, Washington,
 VICE-PRESIDENT 1911, MISS ALICE C. FLETCHER, Washington.
 VICE-PRESIDENT 1912, PROF. R. B. DIXON, Cambridge
 VICE-PRESIDENT 1913, PROF. GEORGE B. GORDON, Philadelphia.
 VICE-PRESIDENT 1914, DR GEO. A. DORSEY, Chicago.
 SECRETARY, PROF. GEORGE GRANT MACCURDY, New Haven.
 TREASURER, MR B. T. B. HYDE, New York.
 EDITOR, DR JOHN R. SWANTON, Washington.

Executive Committee; The President, Secretary, Treasurer, Editor, (*ex-officio*), and F. W. HODGE, CHARLES PEABODY, and PLINY E. GODDARD.

COUNCIL: W J McGEE, F. W. PUTNAM, F. BOAS, W. H. HOLMES, J. W. FEWKES, ALICE C. FLETCHER, R. B. DIXON, G. B. GORDON, G. A. DORSEY, G. G. MACCURDY, B. T. B. HYDE, JOHN R. SWANTON (*ex-officio*); E. L. HEWETT, S. A. BARRETT, W. HOUGH, A. HRDLÍČKA, A. L. KROEBER, A. M. TOZZER, F. G. SPECK, A. A. GOLDENWEISER (1911); H. I. SMITH, G. H. PEPPER, W. C. FARABEE, F. W. HODGE, G. G. HEYE, H. J. SPINDEN, T. T. WATERMAN (1912); W. C. MILLS, H. MONTGOMERY, C. B. MOORE, W. K. MOOREHEAD, C. PEABODY, C. C. WILLOUGHBY, P. E. GODDARD, T. MICHELSON (1913); A. F. CHAMBERLAIN, C. P. BOWDITCH, S. CULIN, R. H. LOWIE, C. WISSLER, C. H. HAWES, E. SAPIR, P. RADIN (1914).

LIFE MEMBERS

MR EDWARD E. AYER,* Railway Exchange Building, Chicago.	MR GEORGE G. HEYE, 60 Broadway, New York City.
MR WILLIAM K. BIXBY, 805 Century Building, St. Louis.	MR ARCHER M. HUNTINGTON,* Hispanic Society of America, Audubon Park, New York City.
MR CHARLES P. BOWDITCH,* 28 State st., Boston.	M. LE DUC DE LOUBAT,* 53 Rue Dumont d'Urville, Paris.
Mr P. G. GATES, South Pasadena, Cal.	MR CLARENCE B. MOORE,* 1321 Locust st., Philadelphia.

ACTIVE MEMBERS

ACADEMY OF NATURAL SCIENCES, Philadelphia, Pa.	DR CYRUS ADLER, 2041 N. Broad st., Philadelphia, Pa.
MR EDWARD D. ADAMS,* 71 Broadway, New York City.	DR JUAN B. AMBROSETTI,* Santiago del Estero 1298, Buenos Aires, Argentina.
ADELBERT COLLEGE LIBRARY, Cleveland, Ohio.	AMERICAN GEOGRAPHICAL SOCIETY, 15 West 81st st., New York City.
MR WILLIAM F. ALLEN, Dep't of Zoölogy, University of Illinois, Urbana, Ill.	AMERICAN MUSEUM OF NATURAL HISTORY, New York City.

¹ Members whose names are marked with an asterisk (*) are Founders of the Association.

- AMERICAN PHILOSOPHICAL SOCIETY,
104 South Fifth st., Philadelphia, Pa.
- MR HENRY M. AMI,
Geological Survey of Canada, Ottawa.
- DR ROBERT ANSLEY,
Indiana Harbor, Indiana.
- ANTHROPOLOGY CLUB,
Herrick Hall, Yale University, New Haven,
Conn.
- MR BENJAMIN W. ARNOLD,
465 State st., Albany, N. Y.
- DR FELIX ARNOLD,
824 St. Nicholas ave., New York City.
- ATHENÆUM LIBRARY,
Minneapolis, Minn.
- MR E. E. BAIRD,
216 S. Main st., Poplar Bluff, Mo.
- DR FRANK BAKER,
Zoological Park, Washington, D. C.
- DR W. C. BARNARD,
Seneca, Newton Co., Mo.
- DR S. A. BARRETT,
Public Museum, Milwaukee, Wis.
- DR GEORGE M. BARRIE,*
601 West 110th st., New York City.
- DR ROBERT BENNETT BEAN,
4423 Pitt st., New Orleans, La.
- MR BUCKNER BEASLEY,
132 Commerce st., Montgomery, Ala.
- MISS MARTHA WARREN BECKWITH,
Vassar College, Poughkeepsie, N. Y.
- MR THOMAS BECKWITH,
Box 437, Charleston, Mo.
- BELOIT COLLEGE LIBRARY,
Beloit, Wisconsin.
- BERNICE PAUHAHI BISHOP MUSEUM,
Honolulu, H. I.
- PROF. HIRAM BINGHAM,
787 Prospect st., New Haven, Conn.
- MRS THOMAS B. BISHOP,
2309 Washington st., San Francisco, Cal.
- MR A. H. BLACKISTON,
Union Square Hotel, San Francisco, Cal.
- PROF. FRANZ BOAS,*
Columbia University, New York City.
- DR ERIC BOMAN,
21 Rue d' Edinbourg, Paris, France.
- S. ALTESSE LE PRINCE ROLAND BONA-
PARTE,
10 Avenue d'Jéna, Paris, France.
- MR A. O. BOWDEN,
Paris, Tenn.
- MR JACOB T. BOWNE,
121 Northampton st., Springfield, Mass.
- MRS ELIZABETH M. BRACE,
223 East 17th st., New York City.
- PROF. J. C. BRANNER,*
Stanford University, California.
- MR PETER A. BRANNON,
Box 358, Montgomery, Ala.
- MR H. M. BRAUN,
1618 Belmont ave., East St. Louis, Ill.
- JUDGE JOSEPH A. BREAUX,
Supreme Court of Louisiana, New Orleans,
La.
- MISS ADELA C. BRETON,
Care Wilts and Dorset Bank, Bath, Eng-
land.
- REV. R. J. BRIGGS,
204 W. 7th st., Austin, Texas.
- BROOKLYN INSTITUTE MUSEUM LIB.,
Eastern Parkway, Brooklyn, N. Y.
- MR HENRY L. BROOMALL,
14 South ave., Media, Pa.
- DR MACMILLAN BROWN,
Holmbank, Fendalton, Christchurch, New
Zealand.
- BROWN UNIVERSITY LIBRARY,
Providence, Rhode Island.
- MR JAMES C. BRUSH,
Carbondale, Ill.
- DR E. S. BURGESS,*
5 West 82d st., New York City.
- MR DAVID I. BUSHNELL, JR.,
University, Va.
- DR AMOS W. BUTLER,*
State House, Indianapolis, Indiana.
- CALIFORNIA ACADEMY OF SCIENCES,
San Francisco, Cal.
- MR H. H. CAMMANN,*
51 Liberty st., New York City.
- MR JOSEPH P. CAMP,
2017 I st., N. W., Washington, D. C.
- MR LOUIS B. CAPRON,
Oneonta, N. Y.
- MR F. F. CAREY,
Tuxedo Park, N. Y.
- CARNEGIE LIBRARY,
Pittsburg, Pa.
- DR ALFREDO DE CARVALHO,
37 Aurora, Recife, Pernambuco, Brazil.
- PROF. ALEXANDER F. CHAMBERLAIN,*
Clark University, Worcester, Mass.
- CINCINNATI PUBLIC LIBRARY,
Cincinnati, Ohio.
- CITY LIBRARY ASSOCIATION,
Springfield, Mass.
- MRS KATE FOOTE COE,
Drawer 1, New Haven, Conn.
- MR F. C. COLE,
Field Museum of Natural History, Chi-
cago, Ill.
- COLUMBIA UNIVERSITY LIBRARY,
New York City
- REV. GEORGE W. COOKE,
49 Park ave., Wakefield, Mass.
- MR MADISON COOPER,
Watertown, N. Y.
- CORNELL UNIVERSITY LIBRARY,
Ithaca, New York.

- MR STEWART CULIN,*
Brooklyn Institute of Arts and Sciences,
Brooklyn, N. Y.
- MISS ANNA F. CUMMINGS,
Box 8, N. Raynham, Mass.
- PROF. BYRON CUMMINGS,
Salt Lake City, Utah.
- DR R. G. CURTIN,*
22 South 18th st., Philadelphia, Pa.
- MR E. S. CURTIS,
Seattle, Washington.
- MR G. CUSACHS,
524 Esplanade, New Orleans, La.
- MR G. E. DAVIS,
Dubuque, Iowa.
- PROF. H. B. DAVIS,
Normal School, California, Pa.
- DR SALVADOR DEBENEDETTI,
Calle Viamonte 430, Buenos Aires, Arg.
Republic.
- MR F. S. DELLENBAUGH,*
226 West 78th st., New York City.
- MR G. E. DIMOCK,*
Elizabeth, New Jersey.
- DISTRICT OF COLUMBIA PUBLIC LIB-
RARY,
Washington, D. C.
- DR JOSEPH KOSSUTH DIXON,
Wanamaker Auditorium, Philadelphia,
Pa.
- PROF. ROLAND B. DIXON,*
Harvard University, Cambridge, Mass.
- PROF. R. E. DODGE,*
Teachers College, Columbia University,
New York City.
- PROF. H. H. DONALDSON,
Wistar Institute of Anatomy, Phila.
- DR GEORGE A. DORSEY,*
Field Museum of Natural History, Chicago.
- MRS M. A. DRAKE,
220 S. Main st., Franklin, N. H.
- MR WILBERFORCE EAMES,
New York Public Library, N. Y. City.
- DR. N. B. EMERSON,
Honolulu, H. I.
- LIEUT. GEORGE T. EMMONS, U.S.N.,
Princeton, N. J.
- DR WM. C. FARABEE,
Peabody Museum, Cambridge, Mass.
- MRS EVA S. FENYES,
P. O. Box W, Pasadena, Cal.
- DR J. WALTER FEWKES,*
Bureau of American Ethnology, Wash-
ington, D. C.
- DR MAURICE FISHBERG,
1337 Madison ave., New York City.
- PROF. IRVING FISHER,
460 Prospect st., New Haven, Conn.
- MISS ALICE C. FLETCHER,*
214 First st., S. E., Washington, D. C.
- DR J. M. FLINT,*
Stoneleigh Court, Washington, D. C.
- DR DANIEL FOLKMAR,*
1310 Park Road, n. w., Washington, D. C.
- MRS. EDNA H. FORD,
Waupun, Wisconsin.
- THE FRANCISCAN FATHERS,
St. Michaels, Ariz.
- MR ROBERT GRAHAM FULLER,
Peabody Museum, Cambridge, Mass.
- DR WILLIAM H. FURNESS, 3d,
University of Pennsylvania Museum, Phila-
delphia.
- MR CHARLES W. GATES,
Pasadena, Cal.
- PROF. WILLIAM E. GATES,
Point Loma, Cal.
- MR WILLIAM F. G. GEISSE,
R. F. D. No. 2, Great Barrington, Mass.
- GEOLOGICAL SURVEY OF CANADA,
Ottawa, Canada.
- PROF. FRANKLIN H. GIDDINGS,
Columbia University, New York City.
- DR ALBERT N. GILBERTSON,
Willmar, Minn.
- DR P. E. GODDARD,
American Museum of Natural History,
New York City.
- PROF. GEORGE BYRON GORDON,
University Pennsylvania Museum, Phila.
- GRAND RAPIDS PUBLIC LIBRARY,
Grand Rapids, Mich.
- MR PERCY T. GRIFFITH,
66 Pine st., New York City.
- DR GEORGE BIRD GRINNELL,*
238 East 15th st., New York City.
- MR FRANCIS T. HAGADORN,
1909 Wallace ave., (Van Nest), Bronx, New
York City.
- MR STANSBURY HAGAR,*
48 Wall st., New York City.
- MR ROBERT C. HALL,
240 Fourth ave., Pittsburgh, Pa.
- MRS JOHN HAYS HAMMOND,
1500 Rhode Island ave., N. W., Washing-
ton, D. C.
- MR M. RAYMOND HARRINGTON,
University of Pennsylvania Museum, Phi-
adelphia.
- MR H. H. HARRISON,
60 Broadway, New York City.
- MR E. SIDNEY HARTLAND,
Highgarth, Gloucester, England.
- PROF. C. V. HARTMAN,
Royal Ethnographical Museum, Stock-
holm, Sweden.
- PROF. WILLIAM W. HASTINGS,
Battle Creek, Mich.
- PROF. CHARLES H. HAWES,
Dartmouth College, Hanover, N. H.

- MR CLARENCE L. HAY,
Newbury, New Hampshire.
- DR. HENRY W. HAYNES,*
239 Beacon st., Boston, Massachusetts.
- MRS PHOEBE A. HEARST,*
Pleasanton, California
- REV. JOSEPH C. HERRICK,
St. Joseph's Seminary, Yonkers, N. Y.
- MRS R. F. HERRICK,
2136 15th st., San Francisco, Cal.
- MR EDWARD W. HEUSINGER,
113 City st., San Antonio, Texas.
- DR EDGAR L. HEWETT,*
School of American Archaeology, Sante Fé,
N. Mex.
- MR CHARLES HILL-TOUT,
Bucklands, Abbotsford, B. C.
- MR PHILIP HINKLE,
113-115 East Fourth st., Cincinnati, O.
- MR F. W. HODGE,*
Bureau of American Ethnology, Wash-
ington, D. C.
- DR CHARLES VON HOFFMAN,
2669 California st., San Francisco, Cal.
- DR WILLIAM J. HOLLAND,*
5545 Forbes ave., Pittsburgh, Pa.
- PROF. WILLIAM H. HOLMES,*
U. S. National Museum, Washington,
D. C.
- MR HOMER E. HOOPES,
Media, Pennsylvania.
- MR LOUIS J. HOPKINS,
Winnetka, Illinois.
- DR WALTER HOUGH,*
National Museum, Washington, D. C.
- HOWARD MEMORIAL LIBRARY,
New Orleans, La.
- DR WILLIAM F. HOWAT,
832 Hohman st., Hammond, Ind.
- DR GEORGE P. HOWE,
Peabody Museum, Cambridge, Mass.
- MR HENRY R. HOWLAND,
Library Building, Buffalo, N. Y.
- DR ALEŠ HRDLÍČKA,
National Museum, Washington, D. C.
- MR J. LORENZO HUBBEL,
Ganado, Arizona.
- MR J. F. HUCKEL,*
Union Station Annex, Kansas City, Mo.
- MR ANDREW F. HUNTER,
Barrie, Ontario, Can.
- DR H. M. HURD,*
Johns Hopkins Hospital, Baltimore, Md.
- DR JULIUS H. HURST,
Monte Cito, Santa Barbara, Cal.
- MR DAVID HUTCHESON,*
Box 4, East Capitol sta., Washington,
D. C.
- MR B. TALBOT B. HYDE,
11 Broadway, New York City.
- ILLINOIS UNIVERSITY LIBRARY,
Urbana, Ill.
- INDIANA STATE LIBRARY,
Indianapolis, Indiana.
- IOWA STATE LIBRARY
Iowa City, Iowa.
- MRS PERCY JACKSON,
63 E. 52d st., New York City.
- DR A. JACOBI,
110 W. 34th st., New York City.
- MRS WILLIAM JAMES,
Merida, Yucatan.
- MR L. W. JENKINS,
East India Marine Hall, Salem, Mass.
- PROF. ALBERT ERNEST JENKS,*
University of Minnesota, Minneapolis.
- DR JACINTO JIJOUY CAAMANO,
Quito, Ecuador.
- JOHN CRERAR LIBRARY,
Chicago, Ill.
- DR HERMAN F. TEN KATE,
Rennex sur Geuthod, near Geneva, Switz-
erland.
- PROF. FRANCIS W. KELSEY,
University of Michigan, Ann Arbor.
- MR ALFRED V. KIDDER,
Peabody Museum, Cambridge, Mass.
- MISS GEORGIANA G. KING,
Wayne and Walnut sts., Germantown, Pa.
- DR H. KINNER,*
1103 Rutger st., St. Louis, Mo.
- DR WILLIAM B. KIRKHAM,
103 Everit st., New Haven, Conn.
- MISS MARY LOIS KISSELL,
American Museum of Natural History,
New York City.
- DR GEORGE M. KOBER,*
1819 Q st., Washington, D. C.
- PROF A. L. KROEBER,*
Affiliated Colleges, San Francisco, Cal.
- MR FRANCIS LA FLESCHE,
214 First st., S. E., Washington, D. C.
- DR SAMUEL A. LAFONE QUEVEDO,
Museo de La Plata, La Plata, Argentina.
- SR CARLOS M. LARREA,
Apartado Postal 279, Quito Ecuador.
- DR BERTHOLD LAUFER,
Field Museum of Natural History, Chicago.
- PROF. R. LEHMANN-NITSCHKE,*
Museo de la Plata, La Plata, Argentina.
- LELAND STANFORD JR. UNIVERSITY
LIBRARY, Stanford University, Cal.
- DR J. S. LEMON,*
31 Park st., Gardner, Mass.
- MR EMIL LENDERS,
3809 Poplar st., Philadelphia, Pa.
- DR RODOLFO LENZ,
Casilla 844, Santiago de Chile, Chile.
- MR FRANK LEVERETT,
1724 S. University ave., Ann Arbor, Mich.

- DR A. B. LEWIS,
Field Museum of Natural History, Chicago.
- MR EDWARD LINDSEY,*
Warren, Pa.
- DR R. A. DOUGLAS LITHGOW,
1 Mountfort st., Boston, Mass.
- MR M. C. LONG,*
Missouri ave. and Main st., Kansas City,
Missouri.
- REV. DR JAMES WILLIAM LOWBER,
113 East 18th st., Austin, Texas.
- DR ROBERT H. LOWIE,
American Museum of Natural History,
New York City.
- PROF. GEORGE W. A. LUCKEY,
1439 R st., Lincoln, Neb.
- DR CARL LUMHOLTZ,*
129 E. 17th st., New York City.
- LYME PUBLIC LIBRARY,
Lyme, Conn.
- PROF. GEORGE GRANT MACCURITY,*
Yale University, New Haven, Conn.
- DR J. B. MCGEE,*
8117 Woodland ave., Cleveland, Ohio.
- DR W. J. MCGEE,*
Washington, D. C.
- MR J. D. MCGUIRE,*
1834 16th st., Washington, D. C.
- MR T. A. MCKAY,
Cloquet, Minn.
- DR F. W. MARLOW,*
200 Highland st., Syracuse, New York.
- DR W. L. MARSDEN,
Box 22, Burns, Oregon.
- MISS MYRA B. MARTIN,*
27 William st., New York City.
- MR JOHN ALDEN MASON,
212 West Cheltenham ave., Germantown, Pa.
- MR MARK MASON,
4243 Calumet ave., Chicago, Ill.
- MR ALBERT MATTHEWS,*
Hotel Oxford, Boston, Mass.
- MR JOHN D. MATTSON,
2017 I st., N. W., Washington, D. C.
- PROF. GEORGE H. MEAD,
University of Chicago, Chicago, Ill.
- MR WILLIAM H. MECHLING,
University of Pennsylvania Museum, Phil-
adelphia, Pa.
- DR C. HART MERRIAM,
1919 16th st., N. W., Washington, D. C.
- DR TRUMAN MICHELSON,
Bureau of American Ethnology, Washing-
ton, D. C.
- DR MILO G. MILLER,
4018 Spring Garden st., Philadelphia, Pa.
- MR W. C. MILLS,*
State University, Columbus, Ohio.
- MILWAUKEE PUBLIC MUSEUM,
Milwaukee, Wis.
- REV. CHARLES A. MITCHELL, Ph.D.,
Bellevue, Nebraska.
- MR E. J. MOLERA,*
2025 Sacramento st., San Francisco, Cal.
- PROF. WILL S. MONROE,
State Normal School, Upper Montclair,
N. J.
- MR FREDERICK MONSON,
Salmagundi Club, 14 West 12th st., New
York City.
- PROF. HENRY MONTGOMERY,
Museum of the University of Toronto,
Toronto, Canada.
- MR JAMES MOONEY,*
Bureau of American Ethnology, Wash-
ington, D. C.
- MR WARREN K. MOOREHEAD,*
Phillips Academy, Andover, Mass.
- REV. A. G. MORICE, O. M. I.,
Winnipeg, Canada.
- PROF. EDWARD S. MORSE,
Peabody Museum, Salem, Mass.
- MR JOHN MURDOCK,*
19 Wendell st., Cambridge, Mass.
- MUSEO NACIONAL DE BUENOS AIRES,
Buenos Aires, Argentina.
- MR BENJAMIN F. NEAD, JR.,
Harrisburg, Pa.
- NEBRASKA UNIVERSITY LIBRARY,
Lincoln, Neb.
- MR NELS C. NELSON,
Affiliated Colleges, San Francisco, Cal.
- MR WILLIAM NELSON,*
8 Church st., Paterson, N. J.
- NEWBERRY LIBRARY,
Chicago, Illinois
- DR C. F. NEWCOMBE,
138 Dallas Road, Victoria, B. C.
- NEW HAMPSHIRE HISTORICAL SOC'Y,
Concord, New Hampshire.
- NEW YORK PUBLIC LIBRARY,
New York City.
- MISS GRACE NICHOLSON,
46 North Los Robles ave., Pasadena
California.
- REV. J. B. NIES,*
Care London City and Midland Bank,
Threadneedle st., London.
- MR LUTHER A. NORLAND,
La Jara, Conejos co., Colo.
- MR ARTHUR W. NORTH,
University Club, Salt Lake City, Utah.
- MRS ZELIA NUTTALL,*
Casa Alvarado, Coyoacán, D. F., Mexico.
- REV. FREDERICK T. MAYER OAKES,
Berlin, Mass.
- DR HALDEMAN O'CONNOR,
13 North Front st., Harrisburg, Pa.
- DR FÉLIX F. OUTES,
La Plata Museum, La Plata, Argentina.

- MR C. L. OWEN,*
Field Museum of Natural History, Chicago.
- DR THOMAS M. OWEN,
State Dep't of Archives and History, Montgomery, Ala.
- HON. VICTOR H. PALTSITS,
1855 Morris ave., New York City.
- DR WILLIAM F. PARKS,
Frisco Bldg., 9th and Olive sts., St. Louis, Mo.
- MR H. H. PARSONS,*
84 Griswold st., Detroit, Michigan.
- DR CHARLES PEABODY,*
197 Brattle st., Cambridge, Mass.
- PEABODY MUSEUM,
Cambridge, Mass.
- PROF. J. E. PEARCE,*
High School, Austin, Texas.
- MR HAROLD PEIRCE,*
222 Drexel Building, Philadelphia, Pa.
- MR GEORGE, H. PEPPER,*
Care George G. Heye, Madison ave., New York City.
- PROF. G. H. PERKINS,*
Burlington, Vermont.
- DR C. A. PETERSON,*
347 Church st., Webster Groves, Mo.
- DR H. PITTIER DE FÁBREGA,*
Bureau of Plant Industry, Washington.
- DR ALEXANDER PRATT, JR.,*
1221 Stratford ave., Bridgeport, Conn.
- PROF. J. DYNELEY PRINCE,*
Columbia University, New York City.
- MR FRANK PROCTOR,
Franklin Falls, N. H.
- DR T. MITCHELL PRUDDEN,*
160 West 59th st., New York City.
- MR EDWARD KIRBY PUTNAM,
Davenport Academy of Sciences, Davenport, Iowa.
- MISS ELIZABETH DUNCAN PUTNAM,
Davenport, Iowa.
- PROF. F. W. PUTNAM,*
Peabody Museum, Cambridge, Mass.
- DR MAX RADIN,
815 E. 165th st., New York City.
- DR PAUL RADIN,
Bureau of American Ethnology, Washington, D. C.
- MR JOHN T. REEDER,
318 College ave., Houghton, Mich.
- DR ADOLPH C. REICHARD,
Marine Biological Laboratory, Helgoland, Germany.
- MRS THOMAS ROBERTS,
The Aldine, Philadelphia, Pa.
- MR DAVID ROBINSON,
726 East 165th st., New York City.
- MR MORGAN P. ROBINSON,
113 South Third st., Richmond, Va.
- COUNT ERIC VON ROSEN,
Rockelstad, Sparreholm, Sweden.
- DR WALTER E. ROTH,
Pomeroon River, British Guiana.
- ST. LOUIS MERCANTILE LIBRARY,
St. Louis, Mo.
- DR EDWARD SAPIR,
Geological Survey, Ottawa, Ont.
- MR HOMER E. SARGENT,
47 Harvard st., Worcester, Mass.
- MR SIDNEY B. SCHUYLER,
705 Market st., St. Louis, Mo.
- MR HERBERT F. SCHWARTZ,
20 East 61st st., New York City.
- COL. H. L. SCOTT, U. S. A.,*
Army and Navy Club, Washington, D. C.
- MISS S. A. SCULL,*
401 Water st., Smethport, Pennsylvania.
- MRS MARIANNA P. SEAMAN,*
1424 Eleventh st., N. W., Washington, D. C.
- MISS GERDA SEBBELOV,
521 West 111th st., New York City.
- DR JACK SHIPLEY,
R. F. D. No. 2, Pilot Point, Texas.
- MR A. T. SINCLAIR,
37 North Beacon st., Allston, Mass.
- MR ALANSON SKINNER,
50 Sherman ave., Tompkinsville, N. Y.
- DR C. E. SLOCUM,*
218 13th st., Toledo, Ohio.
- MR HARLAN I. SMITH,
Geological Survey, Ottawa, Ont.
- MISS LAUREN P. SMITH,
219 East Market st., Warren, Ohio.
- DR LEE H. SMITH,
663 Main st., Buffalo, N. Y.
- PROF. WILLIAM BENJAMIN SMITH,
Tulane University, New Orleans, La.
- DR OLOF SOLBERG,
Historical Museum, Christiania, Norway.
- DR FRANK G. SPECK,
University of Pennsylvania Museum, Philadelphia.
- DR H. J. SPINDEN,
American Museum of Natural History, New York City.
- PROF. EDWARD ANTHONY SPITZKA,
Jefferson Medical College, Philadelphia.
- PROF. FREDERICK STARR,*
Chicago University, Chicago, Illinois.
- MR VILHJÁLMUR STEFANSSON,
15 W. 81st st., New York City.
- DR KARL VON DEN STEINEN,
1 Friedrichstr., Steglitz, Berlin, Germany.
- DR JAMES F. STEVENS,*
1136 O st., Lincoln, Nebraska.
- MR OTTO STÖGER,
Austro-Hungarian Consulate, New Orleans, La.

- DR WILLIAM A. STONE,
1102 W. Main st., Kalamazoo, Mich.
- MR BRADSHAW H. SWALES,
Grosse Ile, Michigan.
- DR JOHN R. SWANTON,*
Bureau of American Ethnology, Wash-
ington, D. C.
- MISS GRACE E. TAFT.
50 West 93d st., New York City.
- MR ERASTUS TEFFT,
Hanover Bank Building, New York City,
N. Y.
- MR JAMES TEIT,
Spences Bridge, B. C.
- DR JULIO CÉSAR TELLO,
5 Sumner road, Cambridge, Mass.
- MR BENJAMIN THAW,*
Morewood place, Pittsburgh, Pa.
- PROF. W. I. THOMAS,
Chicago University, Chicago, Ill.
- DR ALTON H. THOMPSON,*
720 Kansas ave., Topeka, Kansas.
- PROF. E. L. THORNDIKE,*
Columbia University, New York City,
N. Y.
- DR TOWNSEND W. THORNDIKE,
20 Newbury st., Boston, Mass.
- DR JOE H. TODD,
Wooster, Ohio.
- DR JOHN L. TODD,
McGill University, Montreal, Canada.
- MR WILLIAM WALLACE TOOKER,*
70 Main st., Sag Harbor, New York.
- TORONTO UNIVERSITY LIBRARY,
Toronto, Canada.
- DR A. M. TOZZER,*
Peabody Museum, Cambridge, Mass.
- PROF. DR UHLENBECK,
Nieuwe Rijn 69, Leiden, Netherlands.
- UNIVERSIDAD NACIONAL DE LA PLATA
(BIBLIOTECA),
La Plata, Argentina.
- MR H. H. VAIL,*
American Book Co., Washington Square,
New York City.
- MRS EDW. PLEASANTS VALENTINE,
411 E. Franklin st., Richmond, Va.
- MR. THOMPSON VAN HYNING,
Historical Department of Iowa, Des Moines,
Iowa.
- MR F. W. VOLLMANN,
Stebnitz i Sachsen, Germany.
- HON. R. E.-M. GREGORIE DE WALLANT,
Millonaya 25 K 64, City of Mexico.
- DR ATREUS WANNER,
York, Pennsylvania.
- MISS H. NEWELL WARDLE,*
Academy of Natural Sciences, Phila.
- MR J. OGLE WARFIELD,
University of Pennsylvania Museum, Phil-
adelphia, Pa.
- MRS MURRY WARNER,
204 Dearborn st., Chicago, Ill.
- PROF. H. C. WARREN,*
Princeton, New Jersey.
- MR THOMAS T. WATERMAN,
Affiliated Colleges, San Francisco, Cal.
- WATKINSON LIBRARY,
Hartford, Conn.
- MR PHILIP WELCH,
Duquesne, Pa.
- MR LINCOLN WELLES,
Wyalusing, Pa.
- MR GEORGE X. WENDLING,
996 Haight st., San Francisco, Cal
- DR M. F. WHEATLAND,*
84 John st., Newport, Rhode Island
- DR HENRY M. WHELPLEY,
2342 Albion place, St. Louis, Mo.
- MR JOHN JAY WHITE, JR.,
1734 N. st. N. W., Washington, D. C.
- JUDGE JAMES WICKERSHAM,*
Fairbanks, Alaska.
- MR CHARLES W. WIEGEL,
Olympia, Wash.
- DR HARRIS H. WILDER,
Smith College, Northampton, Mass.
- MR BLAIR S. WILLIAMS,
25 Broad st., New York City.
- HON. E. T. WILLIAMS,
Care Department of State, Washington,
D. C.
- MR C. C. WILLOUGHBY,*
Peabody Museum, Cambridge, Mass.
- MR J. HOWARD WILSON,
Castine, Maine.
- PROF. N. H. WINCHELL,
University of Minnesota, Minneapolis.
- DR CLARK WISSLER,
American Museum of Natural History,
New York City.
- DR FREDERICK A. WOODS,
1006 Beacon st., Brookline, Mass.
- DR SAMUEL B. WOODWARD,
58 Pearl st., Worcester, Mass.
- DR DEAN C. WORCESTER,*
Manila, Philippine Islands.
- MR CHRISTOPHER WREN,
Centre st., Plymouth, Pennsylvania.
- PROF. G. FREDERICK WRIGHT,
Oberlin, Ohio.
- DR JONATHAN WRIGHT,
44 West 49th st., New York City.
- MR JOHN M. WULFING,
3448 Longfellow Boulevard, St. Louis,
Missouri.
- REV. JEREMIAH ZIMMERMAN, D. D.,
LL. D.
107 South ave, Syracuse, N. Y.

DECEASED MEMBERS

PAUL EDMOND BECKWITH,* 1907.
DAVID BOYLE,* 1911.
GUSTAV BRÜHL,* 1903.
ALFREDO CHAVERO, 1906.
M. A. CLANCY,* 1902.
WILLIAM E. DODGE,* 1903.
GEORGE J. ENGLEMAN,* 1903.
WESTON FLINT,* 1906.
DANIEL GARCIA, 1907.
JOHN WALTER HASTINGS, 1908.
MRS ESTHER HERRMAN,* 1911.
JOHN H. HINTON,* 1905.
RICHARD HODGSON,* 1905.

WILLIAM JONES, 1909.
WALTER S. LOGAN,* 1906.
OTIS TUFTON MASON,* 1908.
WASHINGTON MATTHEWS,* 1905.
WILLIAM WELLS NEWELL, 1907.
J. W. POWELL,* 1902.
FRANK RUSSELL,* 1903.
HORATIO N. RUST, 1906.
P. S. SPARKMAN, 1907.
ROLAND B. STEINER,* 1906,
WILLIAM G. SUMNER, 1910.
EDW. PLEASANTS VALENTINE, 1908.
JOHN HENRY WRIGHT, 1908.

American Anthropologist

NEW SERIES

VOL. 13

APRIL-JUNE, 1911

No. 2

A NEW CONCEPTION OF TOTEMISM¹

BY ROBERT H. LOWIE

THE significance of Dr Goldenweiser's recent paper on totemism lies in the fact that it presents for the first time what may be legitimately called "an American view of totemism,"—"American" not only because it takes into account the data of American ethnography, but in the far more important sense that it is a view based on methodological principles which are becoming the common property of all the active younger American students of ethnology.

According to the traditional view, totemism is an integral phenomenon which is everywhere essentially alike. Thus, in Frazer's latest work on the subject, *Totemism and Exogamy*, the burden of proof is explicitly thrust on the shoulders of those who question the identity of totemic phenomena in different quarters of the globe and who uphold the theory of convergent evolution. In Part I of his paper, "Australia and British Columbia," Dr Goldenweiser has anticipated this challenge. He selects the series of features that are commonly regarded as distinctive of totemism, and compares the forms they assume in the two areas considered. The result is sufficiently striking. On superficial consideration, it appears that the Australian totem group resembles the clan of British Columbia in the exogamic regulation of marriage. But this resemblance is not significant; in both cases the exogamous

¹ *Totemism, An Analytical Study.* By A. A. Goldenweiser. Reprinted from the Journal of American Folk-Lore, vol. XXIII, April-June, 1910, No. LXXXVIII, pp. 115.

character of the clan is not a primary, but a derivative trait. Because the clans are, in both areas, parts of the larger phratric units, and because these phratries are exogamous, the totem clans must be exogamous, even though the clan, as a clan, may have nothing to do with exogamy. In other features, the totem clans of Australia and British Columbia clearly diverge. In Australia the social importance of the clan dwindles into insignificance as compared with that of the phratry; in British Columbia the clan is the social unit, *par excellence*. On the Northwest coast there is evidence for the development of the clans from village communities, such as nowhere exist in Australia. Finally, the American clans are graded as to rank—a condition likewise lacking in Australian totemism. In the matter of clan names, what similarity exists is again of a superficial kind. In Australia all clans are named from their totems; in British Columbia clans frequently derive their names from localities. But precisely where the American social divisions (phratries) are named after animals, we occasionally find that the eponymous animal is not identical with the crest animal, which is the one that corresponds, in religious function, to the Australian totem. If phratries are compared it is found that those of the Tlingit and Haida bear animal names, but that only a few of the Australian phratry names are definitely known to refer to animals. The view that the totemite is a lineal descendant of his totem is clearly developed in Australia; on the Northwest Coast, on the other hand, there is a fundamental belief in *human* descent: the crest animal is one which has in some way been associated with the human ancestor of the group. Nevertheless, the author points out, there are myths in which the association is very close, and, in one group of traditions, the ancestor is the crest animal transformed. These instances, instead of militating against the author's point of view, constitute in reality strong evidence in support of it. For the myths in question result from the reaction of the guardian-spirit concept upon the basic belief that human beings have human ancestors. Now, the guardian spirit concept is practically foreign to Australia. What similarity there exists between the Australian and the American myths is accordingly an ideal instance of convergent evolution. There remains the criterion of the taboo

against eating or killing totems. Of this phase of totemic life Australia remains the classical example; in British Columbia, on the other hand, not a single instance of totemic taboos has hitherto been discovered, though there is an abundance of taboos of non-totemic character.

A survey of the currently assumed symptoms of totemism in the two areas discussed thus reveals far-reaching differences. It would be artificial, however, to confine the comparison within the limits set by conventional definitions of totemism. If we wish to disabuse ourselves of the preconceptions expressed in these definitions, Dr Goldenweiser insists, we must not neglect to consider those cultural features which are empirically found in intimate association with the criteria generally recognized as totemic. In Australia, two elements have risen to so commanding a position within the totemic complex that each has been assumed as the essence and starting-point of totemism generically. These elements are the *intichiuma* ceremonies conducted for the multiplication of the totem animals, and the belief in the reincarnation of ancestral spirits. On the Northwest Coast of America, analogous features are indeed found, but they are wholly dissociated from totemic institutions. A parallel condition of affairs is revealed in viewing the dominant traits of social life in northwestern America. The social life of the Kwakiutl is unintelligible without taking into account the groups of individuals sharing the same guardian spirit; among the tribes farther north the clan tradition is essentially an account of the ancestor's acquisition of his guardian spirit, while the circumstances incident thereto are dramatized in the dances of the secret societies. In Australia guardian spirits are rare, and, where found, are generally quite distinct from the totems; even when the two concepts do coincide, the guardian-spirit factor is of relatively slight moment. A second trait of special significance in the American area is the relationship of totemism to art,—the saturation of practically all decorative attempts with totemic motives, and the retroactive tendency to give, secondarily, a totemic interpretation to designs purely decorative in origin. This intimate connection is largely dependent on the quasi-realistic style characteristic of Northwest American art. In Australia, where geo-

metrical motives predominate, art has exerted but little influence on totemic life.

The empirical consideration of the totemic complex in the two typical regions dealt with thus establishes the essential diversity of the phenomena compared. The dominant motives of Australian totemism are not the dominant motives of Northwest American totemism, and *vice versa*. What resemblances exist are either superficial, or are functions of traits not directly associated with totemism. Here, however, the criticism might be made that totemism in the areas selected is not comparable because the American institution represents a far later stage of development. "The totem," as the author puts it in anticipation of this stricture, "has become attenuated to a crest, to a symbol; the living, flesh and blood relationship with the totem animal has been transferred into the realm of mythology; and, naturally enough, the taboo on the totem animal has dwindled away and finally disappeared." Dr Goldenweiser's answer is unmistakably clear. "To a retort of that character, I would answer that we may safely assert that there is not one phase of human culture, so far represented in an evolutionary series of successive stages of development, where the succession given has been so amply justified by observation of historic fact as to be safely adopted as a principle of interpretation" (p. 22). The evidence from Northwest America must thus be admitted as coördinate with that from Australia.

Having demonstrated the validity of the theory of convergent evolution for the totemic phenomena of Australia and the North Pacific Coast of America, the author proceeds in the second part of his paper, "The Totemic Complex," to consider, one by one, the traditional elements of totemism, and to determine their mutual relations on the basis of the widest possible ethnographic basis.

In the first section of Part II, Dr Goldenweiser takes the important step of divorcing exogamy from the concept of totemism. A discussion of the data on the natives of Assam, the Nandi of East Africa, several Plains Indian tribes, and the Samoan-Fijian culture province, leads to the conclusion that "clan exogamy, although a usual concomitant of the other totemic features, is not a constant, hence not a necessary, concomitant of the latter; and

again, where the other features are absent, exogamy may nevertheless occur" (p. 55).

The pages immediately following embody what is probably the author's most important and original contribution to the subject,—a critique of the concept of exogamy itself. Not only may clans exist independently of exogamic rules, and exogamic rules independently of clans, but even where clan exogamy does exist the union of exogamy with the clan unit may be a secondary feature. In the case of the Kurnai, to be sure, special conditions seem to warrant Howitt's conclusions that marriage was originally regulated by non-localized totem clans, that paternal descent effected a localization of the totems, and that consequently, in recent times, locality has appeared as the regulating factor. But we should not by any means be justified in transferring this mode of reasoning to other areas where different conditions prevail. In British Columbia, for example, it seems probable that the clans at one time occupied separate villages. Now, whether the clans were exogamous as clans, or because they happened to coincide with local exogamic divisions, becomes an open question as soon as the existence of exogamy dissociated from clans has been established. The point comes out even more clearly where kinship exerts an influence on matrimonial regulations. Among the Todas a purely objective investigation reveals a number of exogamous clans, as well as a series of matrimonial rules based on kinship. But, subjectively considered, the matter is quite different. The Toda merely knows that certain relatives through the father and certain relatives through the mother—all of them included in the term *pūliol*—are not marriageable persons for him. Besides members of other clans, an individual's *pūliol* group also embraces *all* the people of his own clan, but this fact does not seem to have been noticed by Rivers' informants before he pointed it out to them. Similarly, among the Blackfoot, members of a band are forbidden to intermarry, not as band members, but because they are considered blood relatives. In a manuscript by Sternberg, which the author lays under contribution for additional facts, the Gilyak are described as a people with exogamous gentes. Now, where gentes as such are the exogamous units, two gentes suffice

for the regulation of tribal marriages, the men of gens A marrying women of gens B, and *vice versa*. This reciprocal relationship is precisely what does not obtain in Gilyak society. If the men of gens A marry women of gens B, the men of gens B are *ipso facto* debarred from marrying women of gens A, the two gentes being regarded as gentes of "sons-in-law" and "fathers-in-law" respectively. The men of B must thus marry women of gens C, and so forth. It is, accordingly, obvious that the gens as such does not determine marriage.

The thesis is thus established that "when the fact of a given social group not marrying within itself is ascertained, the information acquired is but partially complete" (p. 59). The exogamous nature of a group, as objectively observed, may indeed be a primary trait; but it may also be a derivative trait,—a necessary consequence of other regulations not linked with the group as such. Dr Goldenweiser is thus emboldened to inquire, whether the exogamic character of Australian totem clans is a primary or a secondary characteristic. Taking up first the simpler form of social organization typified by the Dieri, *vic.*, two exogamous phratries subdivided into smaller totem groups, he finds that a given clan can not be considered an exogamic unit because in no case are the exogamic marriage regulations fully determined by *clan* affiliation. If this condition *did* obtain, nothing would prevent members of clan *a* from marrying members of clan *b* of the same phratry. But this is emphatically not what takes place. In reality, clan *a* "behaves exactly as would an individual of phratry A if there were no clans" (p. 60). Because it forms part of a larger unit exogamic in its own right, clan *a* must *ipso facto* be exogamic. The condition of affairs is strictly parallel to that among the Tlingit and Haida Indians. In Australia the derivative character of clan exogamy is illustrated among the anomalous Aranda (Arunta), where some clans occur in both phratries. Here a man of clan *a* may marry a woman of clan *a* if she belongs to a different phratry, but he must not marry her if she belongs to the same phratry.

The argument is greatly strengthened by a consideration of the four-class system. For here the *class* is the marriage-regulating unit, and the clans are in no sense exogamous units, as each clan

contains two sets of members with distinct matrimonial regulations. In tribes with the eight-sub-class system a parallel argument holds: the sub-class is the marriage-regulating unit, and each clan consists of "four matrimonially heterogeneous units." The question arises, what, in these systems, may be the marriage-regulating functions of the phratry, and of the phratry and class, respectively? Dr Goldenweiser is of opinion that in the four-class system the fact beyond doubt is the exogamy of the *class*, while that of the phratry remains to be investigated; in the eight-sub-class system the immediate data indicate the exogamous nature of the *sub-class*, and the matrimonial functions of the class and phratry remain to be investigated. The point to be determined would be the native feeling with regard to these larger units,—whether, for example, the phratry of four-class tribes continues in the minds of the natives to constitute a distinct exogamic group. The necessity of taking into account the subjective attitude of the natives is strikingly illustrated in perhaps the most suggestive passage of the entire paper. A purely objective description of the regulations found among four-class tribes does not by any means necessitate the current mode of representation. Instead of subdividing two phratries into two exogamous classes, it is possible to unite the intermarrying classes into *endogamous* moieties with exogamous subdivisions. This has actually been done by Professor Klaatsch, a relatively naïve observer in matters ethnological, in the description of Niol-Niol social organization. This traveler has even recorded native names for the endogamous moieties. Dr Goldenweiser rightly insists that, objectively, Klaatsch's mode of representation is as legitimate as the one ordinarily employed. His suspicions are aroused merely by the fact that endogamous moieties *recognized as such by the aborigines* have hitherto escaped the eyes of other Australian ethnographers. Moreover, the class names of the Niol-Niol apparently correspond to those of the Aranda, whose phratry-class organization seems firmly established. Accordingly, the author does not contend that Klaatsch's scheme represents the subjective facts, though he admits that "on a par with the dominant phratric organization there may also exist in these Australian tribes a consciousness of the objectively endogamous groups constituted by the pairs of intermarrying classes" (p. 64).

In this extraordinarily illuminating discussion the critic can find fault only with the author's use of the term "exogamy." A word is obviously required to designate the rule against members of a group marrying among themselves,—in other words, the rule of the incest group. The word sanctioned by usage is the etymologically unexceptionable and self-explanatory term "exogamy." Dr Goldenweiser, however, modeling his conception of the "typical exogamous relation" on the conditions supposedly found in Australian tribes with two phratries, writes: "An exogamous relation is fully represented only when both the group within which marriage is prohibited, and the one into which it is permitted or prescribed, are given" (p. 60). Accordingly, he views the class (among four-class tribes) as the exogamous unit *par excellence*, and finds an approach to "pure totemic exogamy" in the Arábana institution of each totem clan being permitted to intermarry with only one particular clan of the complementary phratry. Were the matter one purely of nomenclature, the re-definition of a current term would, of course, be perfectly legitimate. In the present instance, however, it seems to the critic that the term is not, and can not conveniently be, used with consistency in the modified sense. Where there are only two social units exogamous in their own right, intermarriage follows as a physical necessity; the group into which marriage is permitted or prescribed is determined by the mere statement of the prohibitory regulations. This is obviously not the case when there are four, or six, or fourteen groups, within each of which marriage is prohibited. To be sure, it might be said that in such instances the exogamous relation, in Dr Goldenweiser's sense, is fully represented, inasmuch as, where statements to the contrary are lacking, a member of group I may marry members of all other groups. But if positive regulations are to be taken into account, it certainly is not the same thing whether a man *must* marry into the only group existing besides his own, whether he must marry into *one* of a number of other groups, or whether he may marry into *any* of the other groups extant. To the critic it seems that there are only two alternatives. Either we adopt the author's conception of exogamy. Then the mutual relationship of intermarrying classes with rules against intra-class

marriage would form the standard illustration of exogamy; phratries would formally, but, for reasons just given, might *only* formally, exemplify exogamy; and it would be inadmissible to speak glibly of four exogamous Tsimshian clans (p. 9), of a great number of exogamous Khasi clans (p. 53), of fourteen exogamous Bahima clans and forty-one exogamous septs (p. 74). Or, we cling to the accepted usage of the term. Then exogamy may be ascribed to any group prohibiting marriage among its members. In this case, the exogamy of the Kamilaroi class, as well as the exogamy of the Arábana clan, is a derivative feature,—a logical consequence of phratrie exogamy. In addition to this derivatively (and therefore relatively unimportant) exogamic trait, the Kamilaroi class and the Arábana clan have certain positive marriage-regulating functions, which, however, have nothing to do with exogamy, of which the functions are only prohibitory.

In the next part of the section on "Exogamy and Endogamy," the author briefly mentions the constant tendency to extend regulations of marriage, even where fairly definite regulations already exist. An unusually suggestive instance is furnished by the Toda (p. 168). Within the (endogamous) Teivaliol moiety there are a number of exogamous clans. But the members of the Kundr clan outnumber the other clans to such an extent that the exogamous rule can only be followed by the Kundr marrying most of the members of the other clans. Thus very few of the latter are left to marry one another, and the condition of affairs seems to approach as a limit the widespread division of a tribe into two exogamous intermarrying phratries. The occurrence of *positive* obligations for certain classes to intermarry—a point too little noticed by other writers—is strikingly illustrated by the Gilyak groups of prospective husbands and wives. Dr Goldenweiser, in discussing the matrimonial institutions of this people, also calls attention to the correlated rules of "*psychic* intercourse." There is restriction of conversation and intimacy between persons who might come into conflict from jealousy, and avoidance obtains, in different degrees of stringency, between relatives debarred from intermarrying. On the other hand, there is great freedom between prospective husbands and wives, and an extraordinary cordiality characterizes the re-

lations of fathers-in-law and sons-in-law. There can be little doubt that the correlation of the rules for sexual and psychic intercourse, which the author considers only in connection with a single tribe, merits more extensive investigation.

The next two sections, "Totemic Names" and "Descent from the Totem," add little to the argument of the corresponding divisions of Part I. Some additional examples are adduced to show that eponymous totems, while remarkably frequent, do not occur universally, and that the totem is not invariably regarded as the ancestor of the group. Under the heading "Taboo," the author points out that quite generally restrictions of conduct are associated with groups other than totem clans, while there are tribes, such as those of the Iroquois confederacy, whose totem clans are not connected with taboos against killing or eating the eponymous animal. In reply to the specious reasoning of many writers, that totemites abstain from killing or eating their totems *because* they regard them as kin, Dr Goldenweiser intimates that taboos may have a variety of origins. The Omaha furnish a telling series of illustrations. For here many of the taboos associated with totem groups are logically unconnected with the totems, and it seems practically certain that each of these "fanciful prohibitions" had a distinct origin.

In the pages on "The Religious Aspect of Totemism," the author emphasizes the fact that totemism and animal cult are distinct phenomena. Animal worship is prominent where totemic groups do not exist. On the other hand, worship of the totem is very rare, and in some cases there is a complete absence of religious associations with totems. It is obvious that under the circumstances it would be absurd to regard totemism as a form of religion, or as a distinct stage in the evolution of religious beliefs. On this point, at least, Dr Goldenweiser finds himself in agreement with the views put forward in Frazer's most recent publication on the subject.

The comprehensive survey of ethnological phenomena in Part II thus confirms the conclusions arrived at from a comparison of Australian and British Columbian conditions. Totemism can no longer be considered as an integral phenomenon. Totemic com-

plexes are "conglomerates of essentially independent features" (p. 88). It may be possible to trace logically the development of the several traits from a single hypothetical factor of fundamental importance, but only through historical proofs can such deductions gain scientific value even for limited areas. Neither a system of naming groups after totem animals, nor the doctrine of descent from the totems, nor a religious regard for the totem, in fact, not one of the symptoms ordinarily assumed, is a constant feature of totemism; and there is no evidence for the historical or psychological primacy of any one of them. The instances of other factors—magical ceremonies in Australia, esthetic motives in British Columbia—rising to prominence within the totemic complex illustrate the variability of the phenomenon studied, and lead to the important queries, "If totemism includes, roughly speaking, everything, is totemism itself anything in particular? Is there anything specific in this phenomenon, or has the name 'totemism' simply been applied to one set of features here, to another set there, and still elsewhere perhaps to both sets combined?" (p. 89).

Dr Goldenweiser replies that, in the light of his foregoing analysis, the specific trait of totemism can not be a certain definite sum of elements, but only *the relation obtaining between the elements* (p. 92). In a given totemic complex, factors *a, b, c, . . .*, are associated and correlated so as to form a relatively integral combination. The fairly complete integration of totemic factors results from the fact that elements in themselves socially indifferent become associated with clearly defined social groups, the association being effected by means of descent (p. 93). In defining the relationship of the totemic elements, the author starts from a consideration of the current view that totemism has a religious and a social aspect. The occasional absence of any religious factor, notably among the Iroquois, induces him to eliminate the term "religious" and to conceive totemism as the association of "objects and symbols of emotional value" with definite social units, the latter being defined as units perpetuated through descent. Again, totemism is usually described as a static phenomenon. Yet, nothing is more obvious than its variability in time. Dr Goldenweiser's investigation, accordingly, culminates in the dynamic definition: "Totemism

is the process of specific socialization of objects and symbols of emotional value" (p. 97).

As an epilogue, the substance of which would have more appropriately preceded the definition of totemism, comes a discussion of "Origins, in Theory and History." Schmidt's, Frazer's, and Lang's theories are jointly subjected to a methodological critique. Instead of attempting to understand present conditions on the basis of their established antecedents, these theories select a prominent feature of modern totemism and project it into the past, assuming it to be the starting-point of the totemic process. This, the author contends, is unjustifiable; for what is *now* of overshadowing significance need not always have figured with equal conspicuousness. The second step made by the theorists mentioned, namely, the deduction of other features from the one assumed to be primary, is likewise illegitimate; for it assumes the unity of the totemic features and a uniform law of development. The former assumption has been refuted by the preceding analysis, while the latter seems doubtful in the light of modern research. Finally, the authors criticized err in neglecting the influence of borrowing on the development of culture in a given area.

To bring home this last point, Dr Goldenweiser proceeds to show what the course of totemic development has actually been in the carefully studied region of British Columbia. While the southern Shuswap have the loose village organization typical of the Salish tribes of the interior, the western Shuswap have a social system obviously patterned on that of the coastal tribes, and indirectly derived from them. Among other instances within the same area, the transformation of the institutions of certain Athapascan tribes is especially remarkable. Such features as potlatches, clan exogamy, and an hereditary nobility, have been obviously borrowed from neighboring coastal tribes; and in so far as the Athapascan tribes possessing these traits differ in the details of these institutions, the differences can sometimes be directly explained by contact with correspondingly differing tribes of the coast. The actual history of such changes could never be foretold by means of speculations as to primitive psychology; it was ascertained only by intensive study of the influences to which

each tribe has been subjected (p. 109). In the data already accumulated on Australia, Dr Goldenweiser finds evidence of the far-reaching influence of diffusion on cultural development; and his paper terminates in the confident prophecy that future research will reveal conditions of borrowing comparable to those established in British Columbia. As English ethnologists seem to adopt only with reluctance the historical point of view advocated by other students, it may be well to recall Tylor's memorable words: "Most of its phenomena (that is, of human culture) have grown into shape out of such a complication of events, that the laborious piecing together of their previous history is the only safe way of studying them. It is easy to see how far a theologian or a lawyer would go wrong who should throw history aside, and attempt to explain, on abstract principles, the existence of the Protestant Church or the Code Napoléon. A Romanesque or an Early English cathedral is not to be studied as though all that the architect had to do was to take stone and mortar and set up a building for a given purpose" (*Researches into the Early History of Mankind*, p. 4).

The historical significance of Dr Goldenweiser's essay will perhaps become clearer from a parallel between the development of ethnological thinking and the evolution of philosophical thought in general. Popular philosophy has always had the tendency to assume a necessary bond between the constituents of a relatively stable complex of observed elements,—to assume that there is a "thing" which *has* properties, an *ego* which *has* sensations, feelings, and other manifestations of consciousness. Valuable as such summaries of experience are from a practical point of view, they become indefensible from a higher standpoint. The ideas we form of "things" result from an association (by contiguity) of the ideas of its properties. A child learns by experience that a brown patch of color and a certain form of resistance to the touch are linked together, and by connections of these ideas develops the idea of a table. A "thing" is thus nothing distinct from its properties; it is nothing but the sum-total of these properties; there is no mystic unity in reality apart from the properties. (Cf. Höffding, *Psychologie*, pp. 212, 226, 285.) The ethnologist, like the uncritical philosopher, is confronted at every step with conjunctions of feat-

ures which at first seem indissolubly united. A geometrical pattern is associated in the primitive craftsman's mind with some definite animal or plant. It is natural to assume that the association is a primary one,—that the design is a degenerate attempt at realistic representation. Games are played as means of divination or processes of sympathetic magic. Should they not be conceived as ceremonial contrivances? Tales of heroic exploits culminate in the hero's ascension to the sky. Must not the whole plot be a function of his celestial affiliations? Social units with animal names and food taboos prohibit marriage within the group. To regard names, taboos, and exogamous rules as merely manifestations of the same fundamental phenomenon is, at a relatively early stage of inquiry, the obvious and psychologically most intelligible thing to do.

At a more critical stage, however, the instability of the complexes attracts notice. What was at first supposed to be a necessary connection is reduced to a mere conjunction of elements. Thought is no longer arrested by a contemplation of the mystic underlying units and their relations with the observed elements; to determine the nature and interrelations of these elements themselves becomes the highest, nay only possible, goal of investigation. In the domain of physical science, a critical reformation of this type has been, within recent decades, effected by Professor Ernst Mach. In ethnology, the school which has set itself a corresponding aim, which endeavors to supplant the traditional belief in mystic ethnological complexes with a deeper, though, it may be, still only proximate analysis into provisional elements, is the school headed by Professor Franz Boas. Under his influence Kroeber and Wissler have shown that the same pattern is subject to varying interpretations even within the same tribe: design and interpretation are found to correspond to distinct psychological processes. An analogous conclusion with regard to the conjunction of story plot and cosmic phenomena has been drawn by the present writer. Independently of Boas, but in thorough harmony with his point of view, Seler, in criticizing Preuss, and Haddon, in criticizing Culin, have pointed out *en passant* that the association of ritual with forms of diversion is a secondary development. What all

these writers have attempted in the study of their own problems, Dr Goldenweiser has done for the far more complicated subject of totemism. He has shown the futility of attempting to connect any definite conception of concrete ethnological facts with the term "totemism." He has shown that there is no justification for assuming a common substratum underlying all the "totemic" complexes: a complete statement of all the social, religious, esthetic, and other correlates with their interrelations, as found in a given area, exhausts the possibilities of description and explanation.

However, as already shown in the résumé of the section on "The Complex in the Making," Dr Goldenweiser does not abandon the term "totemism," but seeks to justify its retention by a re-definition of the word from a dynamic standpoint. It is here that he passes beyond the limits reached by his fellow-students of secondary associations. For, while the latter are generally content to indicate the fact that a secondary association of elements has occurred, Dr Goldenweiser boldly undertakes to define, with some precision, the process itself of the association. That is to say, he does not merely hold that totemism is the result of a secondary association of social units with various factors. He holds, in addition, that the association resulted from the fact that objects and symbols which were originally of emotional value only to individuals became, through descent, values for definite social groups (p. 97).

Before entering into a critique of this conception, it is worth noting that many forms of association not ordinarily considered totemic would be classed as such according to the new definition. A phratry and a local group might illustrate the dynamic process in question as well as any "totem kin" of other writers. In particular, the fact that the *name* occupies no favored position, but appears as but one factor of many that may be associated, seems to render "totemism" almost all-inclusive. This is especially the case when we consider that, on the author's theory, it is not at all necessary that the names be derived from animals or plants. Discussing Iroquois totemism (p. 96, footnote), Dr Goldenweiser argues that even here, where the totem is merely a name, it, at least formerly, represented an emotional value, inasmuch as other-

wise the name would not have become firmly fixed in social groups. Obviously, the same reasoning—which the reviewer cannot consider conclusive—would apply to local units with non-animal names. It is not clear whether, or where, the author would draw the line here; indeed, the data bearing on names of totem groups require more extensive treatment than that given in the present paper before it will be possible to form a clear view of Dr Goldenweiser's conception of this special point.

Dr Goldenweiser's definition of totemism may be considered from two points of view. In how far does it accurately represent the phenomena commonly designated as totemic? And, to what extent does it represent the totality of phenomena which seem psychologically and sociologically related with these totemic phenomena?

In reply to the first query, it must be admitted that the author's definition outlines a plausible course of development. Nevertheless, it is possible to conceive that conditions other than those defined by Dr Goldenweiser may lead to typical totemism. Assume two locally distinct groups, each with its own taboos against the eating of a certain animal. Then the union of these two groups would lead to a typical totemic society, in the ordinary sense of the term, if we add the feature of exogamy. Such a hypothetical development in no way militates against the author's general point of view. Nevertheless, it is perfectly easy to understand the process, from what we know of the development of taboos, without recourse to the theory that the taboo was originally of only individual significance and afterwards became socialized through descent. Or, to take a case which is not hypothetical. What evidence is there to show that among the Iroquois the clan name was originally an individual possession which, through descent, became socialized? To exclude instances of this type from the list of totemic phenomena by a rigorous application of the definition would reduce the whole discussion to a logomachy, which would be entirely beside the author's purpose. For what he attempts to do is precisely to define the essential features of the process resulting in what are ordinarily called totemic phenomena. The fundamental objection to such a definition as Dr Goldenweiser has attempted is, that it is frequently

impossible to determine whether it correctly represents the historical process of association. If we assume the association of name and social group as the starting-point of totemism—and, as the author himself has shown, this combination sometimes exhausts the content of totemism—it is, in our ignorance of the actual history of the development, impossible either to prove or to refute the theory that the group names, not only in the Iroquois, but in the Australian cases as well, ever served to designate individuals. The inherent probability of such a condition does not seem very great. If the association of *taboo* and social group is taken as the starting point, the *a priori* probability of a socializing process will presumably appear considerably greater to the majority of ethnologists. Nevertheless, the hypothetical instance given above seems to indicate that socialization is not a *Denknotwendigkeit* for the comprehension of the established association. The critic is therefore of opinion that a non-committal attitude on the process of association (so far as it eludes observation) is highly advisable. Totemism would then be defined, not as a *socialization* of various elements of (at least potentially) emotional value, but merely as the *association* of such elements with social groups.

The second question is, does Dr Goldenweiser's conception embrace all the phenomena essentially related to those of totemic phenomena generally recognized as such? The writer feels that, inclusive as is Dr Goldenweiser's definition, it limits the field of totemism too narrowly by an exaggerated emphasis of the element of descent. By a "complete social unit" Dr Goldenweiser understands one group of at least two within the tribe, each including both men and women, and perpetuated by descent (pp. 93, 94, 97, 98). Accordingly, in dealing with the resemblance between totemic institutions and religious societies whose members share the same guardian spirit, he does not discover a genuine homology. "While a certain psychological affinity between the two institutions is not improbable, their genetic relationship, claimed by some, calls for demonstration" (p. 94). The matter of genetic relationship may be dismissed at once as irrelevant, for as Dr Goldenweiser, on the very next page, states his belief in the convergent evolution of totemic phenomena, absence of genetic connections would not, from

his point of view, bar religious organizations from the fold of totemic institutions. Their exclusion, then, rests essentially on the definition of a social unit. Now, the definition given by Dr Goldenweiser seems to the writer quite arbitrary. If the peculiarity of totemic phenomena lies only in the relation obtaining between the elements (p. 92), the psychological resemblance of this relationship would seem to be the predominant issue, while the precise nature of the social group becomes negligible. Among the Gros Ventre (Atsina), where every man passes successively through a series of age-societies, these grades are well-defined social units. The association with each of them of a certain animal for which several of the societies are named, does not seem to differ in principle from the association of a clan with its crest or eponymous animal ancestor. It may not be out of place here to refer to the fact that Schurtz has already darkly hinted at a connection between totemism and the age-grades of the northern Plains Indians (*Altersklassen und Männerbünde*, p. 154). The argument just advanced in behalf of age-societies is obviously applicable to the type of religious societies specifically mentioned by Dr Goldenweiser, as well as to still other forms of social units. Is their exclusion justifiable from a point of view that emphasizes merely the *relation* of elements entering into a "totemic" complex?

In advancing these comments, the writer is fully aware of the fact that he may not have fully grasped Dr Goldenweiser's meaning. The subject of totemism is not yet quite in the position of those metaphysical problems of which Clifford has said that, in discussing them, people find it peculiarly difficult not only to make out what another man means, but even what they mean themselves. But that it is peculiarly difficult to discover another man's conception of totemism, is amply attested by the recent history of ethnology. However this may be, Dr Goldenweiser himself knows quite well that his analytical study is not definitive, but programmatic; that the next step must be a more extensive ethnographic investigation of the field. What he has already given is a statement of first principles. Whatever deficiencies may be found in his definition, he has been the first to show at length, and with irrefragable logic, that totemism can not be treated as an integral datum,—the first,

as already stated, to apply the doctrine of secondary association to the subject of his inquiry. From this point of view, his paper constitutes a landmark in the history of totemic study,—the prolegomena to all positive attempts at a sane interpretation of “totemic” institutions.

AMERICAN MUSEUM OF NATURAL HISTORY,
NEW YORK CITY.

NOTES ON THE MATERIAL CULTURE OF THE HURON

By F. G. SPECK

SEVERAL visits to the Huron Indians of Lorette, P. Q., near Quebec, in 1908-9 and again in 1911,¹ for the purpose of studying their decorative art and moose hair embroidery, an account of which has already been published separately,² also resulted, incidentally, in the collection of some specimens of material culture with explanatory notes which are here presented.

This historic tribe is now represented by those at Lorette, and the band known as Wyandot in Oklahoma, the latter numbering 378 in 1905, while some few more of the Anderdon band are to be found in Ontario near Detroit. The Lorette people, with whom alone this paper is concerned, are classed as the descendants of the Cord people of the Huron confederacy, the Attigneenongnahac³ of the Jesuits, who fled from Ontario to escape the Iroquois about 1650. From 1648 to 1660 the rupture between those of the Huron who fled westward, becoming known as Wyandot, and those who sought the protection of the French near Quebec, became permanent.

The Lorette Huron have been increasing quite rapidly in recent years although none can be strictly regarded as full bloods.⁴ Inter-marriages with Algonkins of the Ottawa and Gatineau rivers, Abenaki of St Francis, Malisit of Cacouna, and a few Montagnais of Lake St John have been of quite frequent occurrence in recent generations.

¹ Supported by Mr George G. Heye.

² Cf. *American Anthropologist*, N. S., Vol. 13, No. 1, Jan.-March, 1911, pp. 1-14.

³ The "Handbook of American Indians" quotes Potier, *Rac. Huron et Gram.* Ms. 1761, as recording the two names *Ekeenteeronon* and *Hatindia8ointen* as the names by which the Lorette Huron referred to themselves, although no translation is offered. The Montagnais of Lake St. John call the Lorette people *Nádownéuts* "People who kill everybody," this being also their name for the Mohawk and other Iroquois.

⁴ For example at my first visit in 1908 the Huron census at Lorette gave 466; in 1910 they numbered 484, exclusive of other Indians, while previous counts gave them 455 in 1904; and 293 in 1890.

The main significance of the information obtained from the Huron of Lorette, aside from the purely objective aspect, is in the fact that it enables us to point out some comparative traits between the Huron, their Iroquoian kindred, and the neighboring Algonkian tribes, leading to the determination of their later ethnographic affinities. From a comparison of the scanty Huron material and the fuller but as yet incomplete and unsystematized studies of the other groups, it seems that the major part of Huron material culture has been pervaded by northeastern Algonkian ideas, while the fundamentally Iroquoian particulars seem to be more like those of the Mohawk. Practically nothing distinctively Huron, as we know the older tribes of this group from the Jesuit accounts, appears to have remained with these people; not even the language. A mass of ethnologic material on this tribe could be compiled from the numerous historical works, but no attempt has been made to undertake this by the writer.

CLOTHING

Information was obtained about clothing to supplement what could be observed from specimens in the possession of the Indians. The characteristic chief's head dress is a large bunch of hawk feathers attached to the crown of a sort of cloth skull cap with a decorated headband and a few ribbons hanging behind (fig. 21). In the finer articles possessed by chiefs a beautifully ornamented silver band encircles it. In the more ordinary articles embroidered moose hair designs suffice. A similar cap with decorated head band and one or two feathers or several strings of beads hanging from the crown was worn by ordinary warriors, and boys. Cutting the hair short has been in vogue for many years among the men. Women mostly part their hair in the middle and tie it up in a coil low down on the back of the head. Upon special occasions a decorated head band with a feather in the rear is worn.

A long, sleeved coat opening down the front is the next article of importance. Among the chiefs this has taken the form of the long broadcloth military coat, with the lapel collar. There is little doubt, however, that some such garment was, in the earliest times, worn by the men of the Huron as well as of other north-

eastern tribes. These coats, either of buckskin or cloth, reach almost to the knees. Around the collar and down the front of the lapels, on crescent-shaped epaulets edged with metal and moose hair dangles, upon the cuffs, and around the border of the skirt, flower decorations in moose hair are placed. A pair of silver bands fastened with ribbons ornaments the arms above the elbows, and



FIG. 21.—Huron chief's feathered headdress.

a woven sash confines the coat at the waist. The sash, being an important article with these people, will later be described separately. A large silver brooch with ornamental etchings fastens the chief's coat at the top. The military coat is as indicative of the chiefs as the large feather-bunch headdress. The men of plainer

rank wear a coat of similar pattern lacking, however, ornamentations. Their coats are usually of some vari-colored, plainer cloth resembling what one sees among the Shawnee, Seminole, and other southern tribes, except that they are a little longer. Men's hunting coats formerly possessed a peaked hood, separate or attached to the collar. Examples of both chief's and ordinary warrior's costume are shown in plate VIII.

The woman's body covering consists of a calico over-waist reaching half way to the knees with a broad frilled collar sometimes enlarged to the proportions of a small cape, fastened across the chest with a silver brooch. In most respects the female costume is quite the same as that worn by the Iroquois women. The ornamentation is frequently elaborate and individual, with beads and ribbon appliqué. The skirt follows the ordinary European pattern, reaching halfway below the knees. Decorations in beadwork or ribbon appliqué border the bottom. No sash confines the woman's over-waist, so this falls loosely over the skirt.

Men's leggings reach from the ankle about three-fourths of the way up the thigh. They give the impression of being a little too short. A flap to be decorated is left to the width of several inches outside the seam which comes at the side of the leg. Huron leggings are much ornamented, having ribbon appliqué or beadwork with the metal dangles on the flap, and ribbon or beadwork around the bottom, at the knee and something around the top. The leggings of common warriors correspond in plainness to their coats. Women's leggings come almost to the knee and have a similarly decorated flap and bottom. I saw no specimens of breechcloths among the Huron and could not find out about them. While similar in general features to the coats worn by neighboring Algonkian tribes, the Huron garment lacks the broad decorated collar on the back which is so characteristic of the others. The conservative distinction between the equipment and clothing of chiefs and ordinary men among these people is a matter worthy of notice.

The moccasins, which are extensively made by these people and sold all over the country, are of an old Huron type. The common variety is really more of a slipper for home use than an article for heavy service. Deer and moose skin is the common moccasin

material. Four distinct types of footwear occur: the common puckered moccasin, with or without ankle flaps and upper exten-

sions (fig. 22); the same with a T-shaped seam on the toe, on account of which this is called the "bull nose"; the lower hind leg of the moose tanned with the hair on and sewed across the toe where the hoof has been cut off; and another, quite different from the preceding in having a sole separate from the upper, the latter in two pieces, one reaching from the heel to the line of the toes, the other covering the toes (fig. 23). The latter has the buskins attached and long lacings which are strung through a loop at each side in front. The same style of lacing

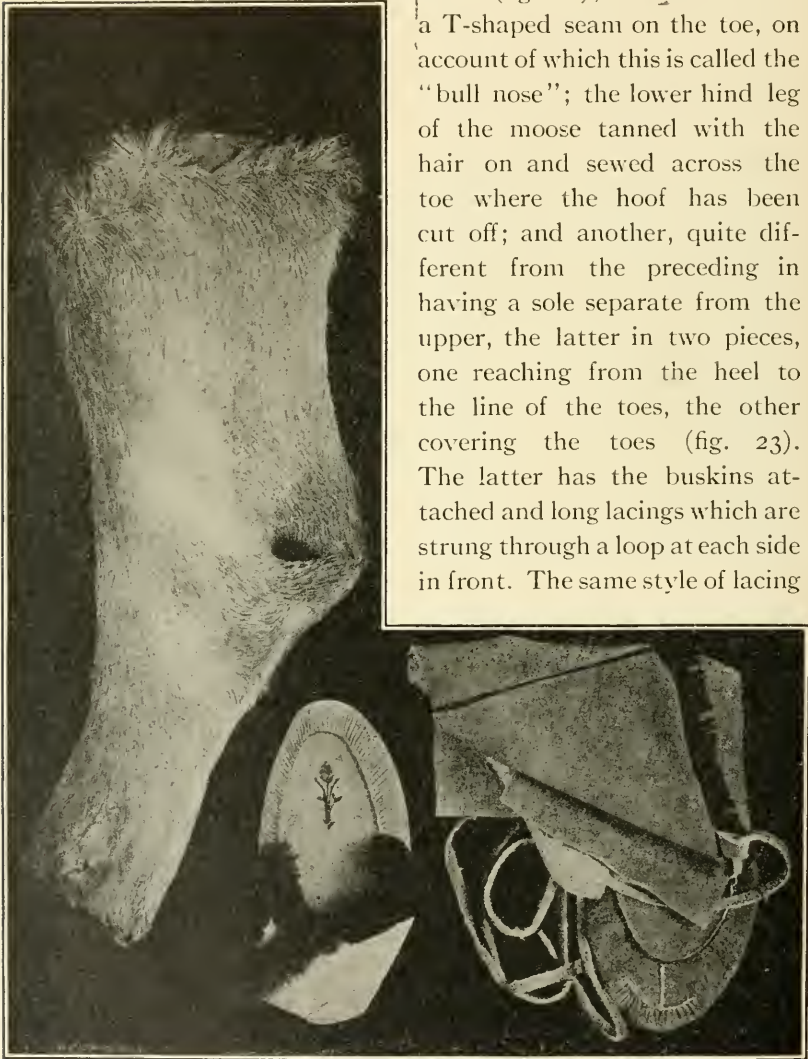


FIG. 22.—Huron moose-hock boot (unfinished) and moccasins.

through a loop I have seen on the other puckered moccasins among the Huron, and seems to be comparable only with what is found on

Eskimo boots. The puckered moccasin is of the type found throughout the northeast and, together with its decorations, is almost exactly the same as that of the Abenaki, Penobscot, and Malisit, although to an observing eye there are minute peculiarities which make a distinction possible, such as the width and length of the vamp, the length of the tongue, and the number of stitches puckered around



FIG. 23.—Huron winter moccasins.

the vamp. In a number of Huron moccasins in which I counted these stitches the average was found to be between fifty and sixty.¹ Only the puckered moccasins have any decorations upon them, most of them having some moose hair embroidery, while some used in snowshoeing are most exquisitely garnitured over the entire vamp. These soft moccasins are only for home wear or snowshoeing

¹ The average number on Penobscot moccasins is, for instance, about 28.

when the snow is dry. The moose hocks and the soled boot-like moccasins are for heavy out of door work in any winter weather.

Moccasins are made by women. The sole and upper is cut according to the pattern and the vamp. The moose hair embroidery is put on the vamp beforehand, then the skin is gathered up over a wooden last having the shape of the fore part of the foot, and the sides of the vamp attached over this to the sides of the upper. The puckered stitch is then filled in across the toe, the creases being marked in deeply with the point of an awl. The last is then pulled out, the heel seam sewed up, and the thing is done. The seams of moccasins of the last type described are usually welted to make them more water tight. Strips of fringed skin or red flannel are sometimes inserted between seams evidently with some idea of ornamentation (see fig. 22).

Out of the above mentioned articles of clothing the number in which there is a close similarity even in details to those of neighboring eastern Algonkian is rather significant, while some head dresses and women's costumes are distinctly Iroquoian.

In regard to the woven sashes worn by men a few words of description are needed. The article averages six to seven feet in length with varying width, the proportions as shown in figure 24. The design is a series of zigzags, in dark red, blue, and buff, to which no interpretation is attached. These sashes were made during the last generation but the art is no longer practiced. The process was described to me as follows. To a peg fixed vertically in the middle of the upper side of a log resting on the ground the required number of threads were tied so that as much of their length extended on one side of the peg as on the other. From the peg as a center one half of the sash is to be woven. Each of the threads was then wound upon a little stick with a sharpened point to be stuck in the ground. By a sort of braiding process, each little stick acting as a shuttle, the fabric was woven and the design brought out. A peculiarity in the weave is that there is a seam lengthwise down the middle of the sash, where the strands are parted, each set of shuttles remaining on its own side. The diamond-shaped designs resulted from manipulating the shuttle containing the same colored threads in groups. To finish the other half of

the sash the operation is carried on on the other side of the peg in the same manner. A hump or elevation in the fabric, which may be seen on all the complete sashes, results from the pulling in the process when the sash is placed over the peg in finishing the

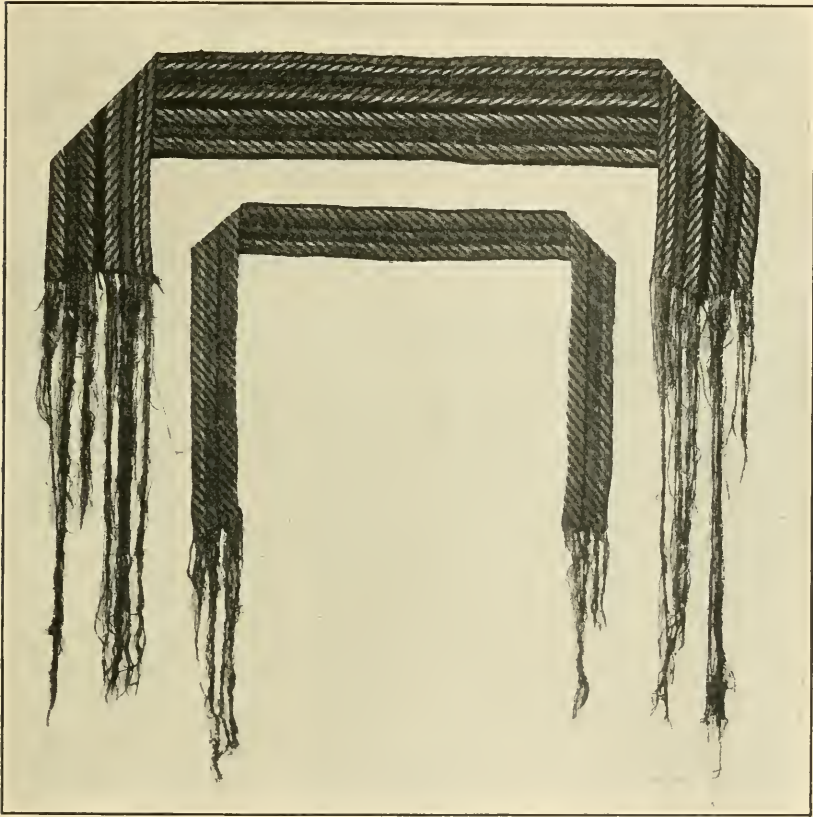


FIG. 24.—Huron woven sashes.

second half. The sash consequently is actually woven from its center outwards in both directions.

When worn these sashes are wrapped twice about the waist and tied in a knot in front with the fringe hanging down before, as may be seen in plate VIII.

Ornaments of beaten silver work were formerly abundant.

Besides the above-mentioned brooches and headbands, finely made earrings were worn by the women. One pair seen consisted of two crescent-like pendants about one inch in diameter, one swinging free inside the other.

While most of the decorative work on clothing was done with moose hair, nevertheless some beadwork is seen in which the designs belong to the double curve type so characteristic of the eastern

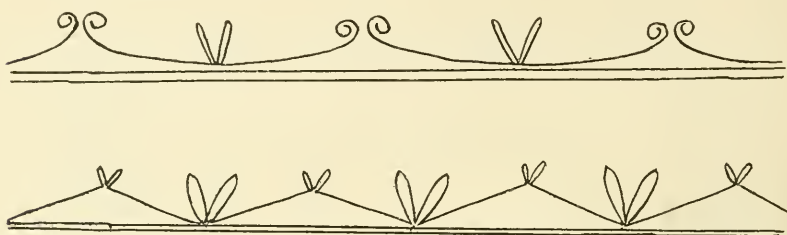


FIG. 25.—Beadwork designs on leggings.

Algonkian, and also found in a modified style among the Iroquois proper. A pair of woman's leggings has a beadwork border with the motive down the flap shown in figure 25.

HIDE TANNING

These people are excellent tanners. After the skin has been removed from caribou, moose, or deer, the first step in the process of preparation is to scrape it free of hair over a log, one end of which rests upon the ground, the other being supported almost waist-high on two legs. With a scraper (fig. 26) like a spoke-shave the

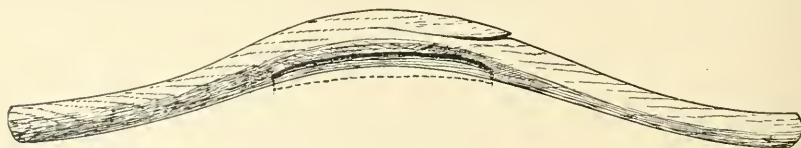


FIG. 26.—Hide scraper.

hair is scrubbed off. I was told that the hide is sometimes stretched on a frame and scraped with a sharp-edged stone. Both of these methods and the implements as well are similar to those which the

neighboring eastern Algonkian have. The next step is to partially dry the skin so that it will soak up the tanning mixture. It is then soaked well in a preparation of animals' brains and oil, grease, or soap. When taken from this bath the skin is wrung dry. This is done by cutting slits down the edges so that it may be fastened on a hook to be twisted and turned with the hand until the moisture is wrung out. The skin is then soaked again in lye made of wood-ashes and this time kneaded and pulled with the hands until it is dry again. Next comes the smoking, the skin being stretched over the head of a barrel under which a smudge is kept burning, or

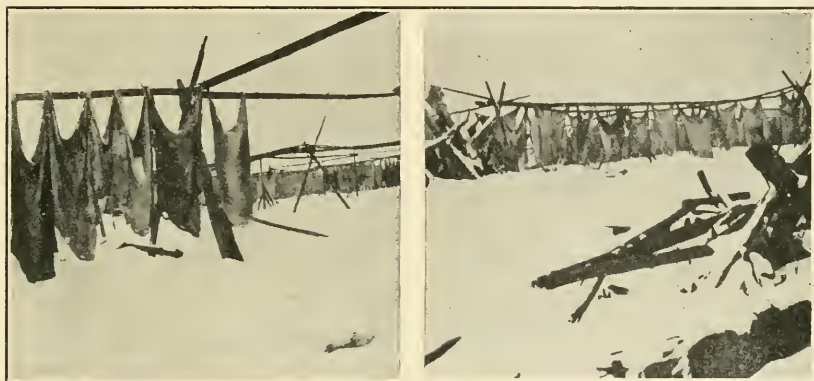


FIG. 27.—Skins drying in winter on racks at Lorette.

laid on a frame over the smudge in a small hut constructed for the purpose. In the smoking process we encounter some interesting distinctive features. The Huron can obtain various shades of tan by using different kinds of wood in the smudge. Rotten maple wood in the smudge gives a reddish tinge to the hide, a balsam fir smudge gives a dark tan which is thought to be the best, pine gives a yellowish and spruce wood a greenish tinge. The time the hide is left in the smudge also governs the color. A beautiful white color results from leaving a skin to dry in the frost and sun in winter. Figure 27 shows a number of skins at Lorette drying outside in winter time, on the frames of horizontal poles supported on tripods. Skins which are properly tanned by the above rather lengthy process, will, it is claimed, soak up water but will become soft and pliable

when dry. Moose skins are considered best for general use. The quality of a tanned skin depends upon how well it has been kneaded in drying.

To make rawhide thongs, or *babiche*, which is so essential in Indian manufactures, these Indians cut hides by sticking a knife in a table or board and drawing the skin against the blade. Or the skin may be held by one person and the lengths cut off by a second. By zigzagging across the skin it is converted into a single strip of hide.

MEANS OF TRANSPORTATION

None of the other Iroquoian tribes apparently make or use snowshoes as much as the Huron who require them almost continually in winter, as the snowfall of the lower St. Lawrence is extreme. For home use, and extensively for commerce as well, one general type of snowshoe is made by them which is now pretty widely distributed over eastern Canada among the whites. The type, however, is an old one adopted by the Huron for service in the rolling country over which they hunt. When going north among the Laurentian Mountains they not infrequently use the Montagnais type of shoe which is broader, shorter, and without the upcurved toe. The Huron shoe either by its frame or weave is identified at sight among the different northern Indians as far as New Brunswick and Maine. The style does not vary much among different Huron makers. A typical specimen of the approved Huron snowshoe is shown in plate ix. The method of manufacture is as follows. The frame is made of selected ash staves cut and squared with the crooked knife. For the space of a foot or so in the middle the stave is thinned considerably so that it may be bent easily. Being then steamed it is bent double, somewhat squared across the front, the two crossbars morticed in, and the ends fastened together with strips of rawhide run through holes. Many now use rivets for this. The front of the Huron shoe is turned up an inch or so above the surface plane. This upturn is obtained by lasting two bent shoe frames tightly together one atop of the other, prying their front ends apart with a lever and inserting a cross stick as a wedge. At this stage the frames are hung up in the house over pegs on the wall near the fire to dry and season. Hand measurements are

commonly used but I can not recall the details. When dry the frames retain their shape permanently.

Now the maker sets to work on his filling. For this the Huron used moose and deer skin, or deer skin, throughout. The moose skin being heavier is better for the middle space which supports the weight of the wearer. Deer skin, or caribou skin when it can be obtained, is used for the head and tail filling. This material, known commonly in the north as *babiche*, is made simply of green hides, with the hair scraped off, soaked in water until thoroughly soft. To cut such a hide into strips a knife is stuck upright in a board and the hide pulled carefully against it, in this way shaving off strips as desired all in one piece from one skin. The cutting usually follows round and round the outside. The rawhide string is then wound up into a ball and thrown into a pail of water ready for use. A ball of *babiche* can be kept a long time by allowing it to dry, after which by soaking again it can be softened. To make extra strong filling, the thongs are stretched while wet between rafters of the house and left to dry. The stretched stuff takes on a much darker hue and is frequently seen in head and tail filling because it is usually finer. The strip which runs around the inside of the frame at the head and tail, to which the filling is rove, is usually of this sort. When there are snowshoes to be netted, or filled as they say, some men assemble and sit in a circle near the fire, each man with his pail of water containing skins of *babiche*, his tools—crooked knife, snowshoe needle, and mesh-punch and block—and the frames on the floor about him. Winter, during the early part of the season, is the favorite time. Pipes and tobacco are also indispensable for the occasion. The head and tail fillings are usually put in first, the body left till last. The diagonals are strung parallel across the middle, the wrappings going directly around the frame and the bars. Next the opposite running diagonal warps are strung and then, with the needle,—a piece of hard wood $2\frac{1}{2}$ inches long, with pointed ends and a hole in the center (pl. x),—the weft is laced in, crossing the intersections of the warps. In the head and tail pieces the only difference is that the warp is wove through a strip running around inside the frame instead of directly over the frame. The reasons for this difference between body and

end filling are obvious. While working around the front bar to space off the heavy reinforced thongs which support the foot, the squared block is used (pl. x). Now that the whole filling has been put in the next step is to even up the spaces of the mesh. For this the mesh-punch made of a sharpened caribou leg bone (pl. x) is brought into use. Holding the frame slantwise in his arms the operator grasps the punch, point downwards like a dagger, and



FIG. 28 —Huron toboggan loaded.

jams it successively into each mesh working quickly back and forth. The snowshoe is then complete except for the lacings, which can be put in at any time. By working together and dividing the labor several men can finish several dozen pairs in a few days.

The network technique of the whole affair is that known as the hexagonal twill, occurring also in fancy baskets. Mere description does not give a proper idea of the snowshoe, the illustration affording the best means of examining its details, which upon comparison with other shoes will be found to vary regularly from tribe to tribe.

The Huron toboggan is another native product of exceedingly

ingenious construction, though similar in most particulars to what is used by the Algonkian. The measurements of a typical toboggan which I used are as follows. The single board which forms the body is eight feet two inches in length, thirteen inches wide at the bow and sixteen at the stern. The board itself is one quarter inch thick and of good pliable material. An upturned bow curve rises eight inches, being held in place by thongs, after having been steamed and bent. Seven crosspieces strengthen the board and two side bars run the entire length, both the crosspieces and bars being held in place by rawhide thongs which on the under running surface of the toboggan are cleverly counter-sunk into the wood so that they will not wear through. Some toboggans are made of two planks, one of which, a little shorter and wider than the one described above, is shown in figure 28.

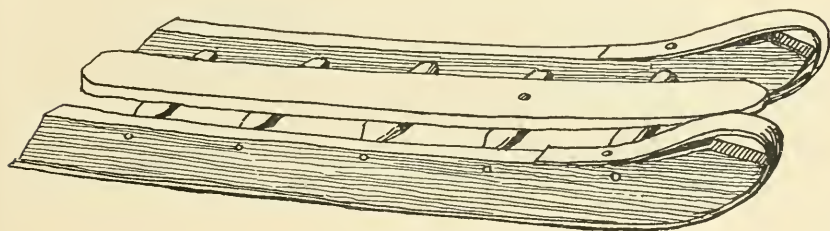


FIG. 29.—Model of Huron sled.

The Huron sled is an affair about five feet long (fig. 29) made of two side pieces with upturned rounded front ends held about a foot and a half apart by five or six stout crosspieces upon which is pegged a board for a platform. The runners are of hard wood nailed or pegged and extending completely over the front. Whether or not the idea was known formerly one frequently sees these Indians nowadays riding on a sled drawn by a single dog harnessed in a collar between two shafts attached to the runners (fig. 30). The idea, however, is evidently borrowed from the French. Sleds of the first type are claimed as native articles and are found similarly among the more conservative eastern Algonkian hunters for transporting their winter supplies through the woods and also for hauling game to camp.

While birch-bark canoes are still occasionally made at Lorette,

the type appears to be so modified toward the Malisit that an independent description seems unnecessary even if the data were at my disposal. Those who follow canoe making are either wholly



FIG. 30.—Huron dog-sled.

or in part of Malisit blood; the art is said to have been brought from the Malisit of Cacouna. The same remarks apply to the birch-bark canoe bailers, maple and ash paddles and poles.

UTENSILS AND MANUFACTURES

The following short account of native activities and implements is based on specimens collected by the writer for Mr Heye.

A tool, used only by women in making baskets, is the gauge (fig. 31). The uniform type among the Huron is a rectangular wedge-shaped piece of wood about four inches long, set with teeth. The prepared splints are cut into strips of equal width, a number at a time, by drawing the splint across these teeth, the instrument being held in the hand. While this same article is found among all the northern basket-making tribes, its form is different in each. Sub-

sequent papers on the eastern Algonkian in preparation by the writer will show the more detailed distribution in type. None have simpler or less ornate gauges than the Huron.

The snowshoe tools, separately described, include, besides the crooked knife, and awl, a wooden needle about three inches long with an eye in the center, a caribou tibia sharpened at one

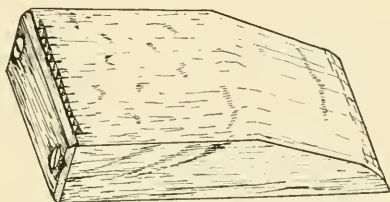


FIG. 31.—Huron basket gauge.

end, mesh-punch and a simple mesh gauge of wood for spacing the openings in snowshoe netting between the front bar and center net.

Awls (fig. 32) for sewing, hole making, and birch-bark work, are made by setting a sharp metal point in a wooden handle.

Like the other northern tribes the Huron men employ the crooked knife (pl. x) almost exclusively for all their work. The tang of the curved blade is set into a deep groove in a wooden handle and wrapped with rawhide. Some uniformity is traceable in the Huron handles, the type of which is represented in the specimens figured. Some are nicely carved.

An ingenious horizontal chest bow-drill is commonly used at Lorette for boring holes in wood. It consists of a bow, drill, and chest-piece (fig. 33). The chest-piece is stuck into the belt, the head of the drill placed against it, and the string of the bow twisted once about the shaft. By leaning against the object to be bored and rotating the drill the work is done horizontally instead of



FIG. 32.—Huron awl.

vertically as among the Eskimo and Iroquois.

The Huron women engage extensively in the manufacture of fancy baskets of ash splints and sweet grass. Their work is practically the same as that of the other northern Algonkian who follow basketry as an industry. To the practiced eye, however, there are minute differences in construction which enable the products of the various tribes to be identified. Since this general technique

is being treated in detail among the Penobscot by Mr Orchard it hardly seems necessary to go into it here.

Some work in birch bark is also carried on, in which more that is distinctively Huron stands out. Very nicely made trinket- and

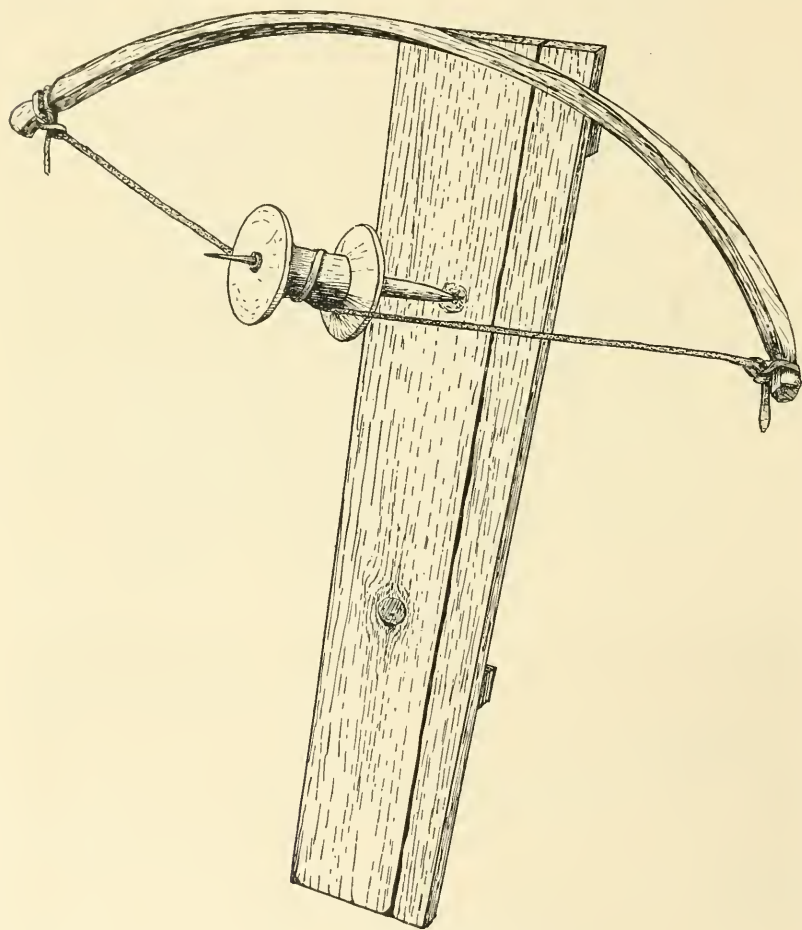


FIG. 33.—Huron chest bow-drill.

work-boxes, from one inch in length to six or eight, are made and decorated with moose hair embroidery sewed on the surface and not inserted into the bark like the quill work of the Micmac and Ojibway. These boxes are oval, top and bottom, with straight

perpendicular sides, and are sewed together with ash splints. Close fitting covers, also of birch bark, are added.

Spoons and ladles for eating are shown in figure 34. They have oval rather narrow bowls, are made of maple, and range from six inches to fourteen. The larger pot ladles have a projecting human face carved on the under side, to catch on the rim and to prevent them from slipping into the vessel.

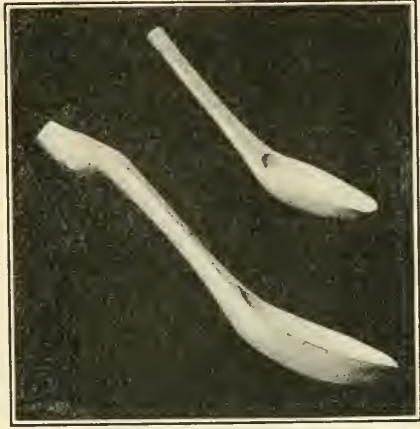


FIG. 34.—Huron spoons.

The bows and arrows, mostly toy articles nowadays, are also similar to those of the eastern Algonkian. The bows are recurved at the ends, with a rawhide string, and are rectangular, in cross section. The arrows are of the common blunt-head type, usually unfeathered. An old specimen, however, shows a sharpened wooden point with three hawk feathers wrapped to the nock with sinew (see

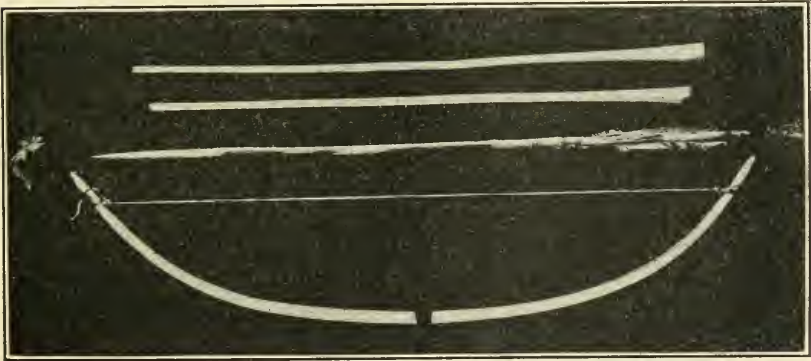


FIG. 35.—Huron toy bow and arrows.

fig. 35). Among the Huron boys I observed the primary, or thumb and bent forefinger, arrow release.

Two toy dolls are shown in plate XI, *a* and *b*, one a female likeness dressed after the historical Huron fashion in cloth, the other in buckskin dressed as a hunter with hood, coat, leggings, shot-pouch, and knife-sheath. Both are made of wood with eyeless faces stained red. Miniature models of men on sleds and toboggans and in canoes are cleverly made by these Indians.

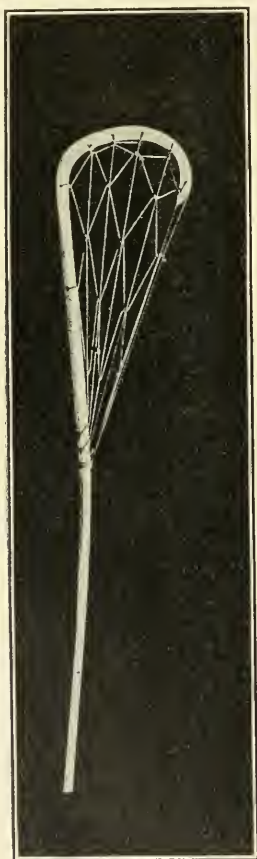


FIG. 36.—Model of lacrosse stick.

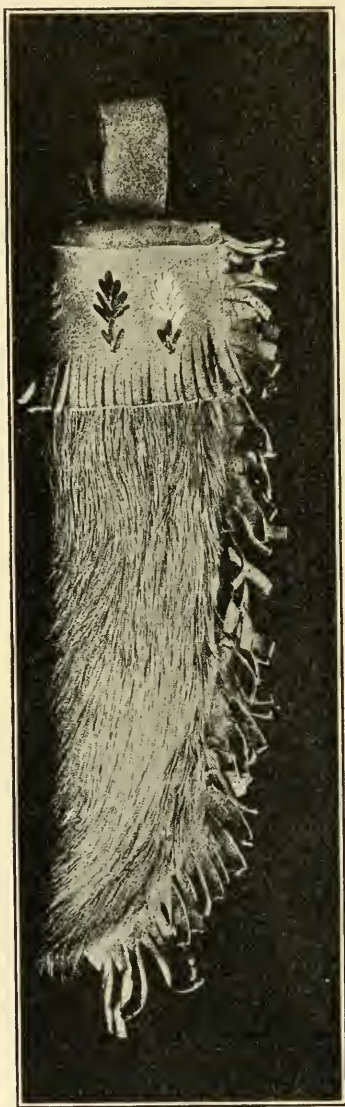


FIG. 37.—Huron knife-sheath.

The game of lacrosse was formerly played by the Huron. A

small model of the netted stick (fig. 36) shows its similarity to the Iroquois article.

Knife-sheaths are used by hunters, made generally of caribou skin with the hair on, and decorated around the top with metal dangles and moose hair embroidery. A typical specimen is shown in figure 37, the designs representing balsam-fir trees.

Ornamental headbands, armbands, brooches, earrings, and circular breast-plates of silver or German silver, were formerly made at Lorette. These were pounded out in the cold state and then stamped with dies and etched in curved lines. Several of these articles appear on the chief in plate VIII. Both in form and decoration

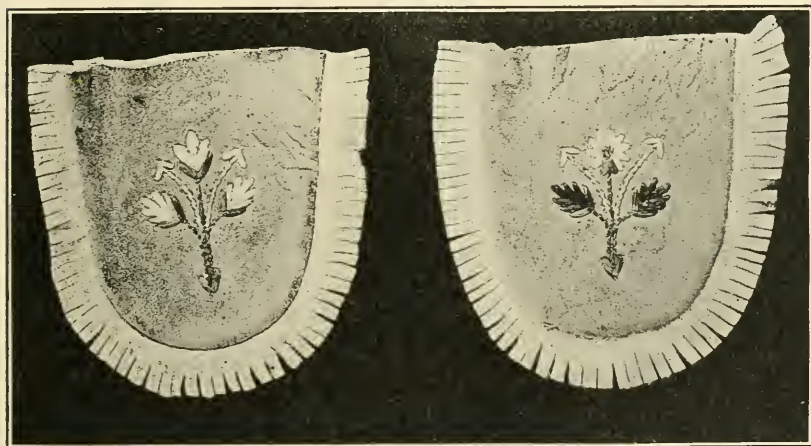


FIG. 38.—Huron moose hair embroidered tobacco bags.

they seem to resemble the work of the Iroquois. Until a generation or two ago one of these large brooches on the chest was the insignia of a chief.

The warlike Huron formerly possessed a number of wampum belts commemorative of their compacts with neighboring tribes. A few of them are still extant here and there. The photograph of two wampum belts in the collection of Mr George G. Heye is included here with some descriptions and explanatory notes since they are so closely related to the life of the Huron. One (fig. 39, *a*), about thirty-one inches long and four inches wide, was obtained from the wife of a Wyandot chief in Oklahoma and unfortunately

is accompanied by no data. It appears, however, to have been made to commemorate peace between two peoples as, indicated by the joined figures in the center. The other happily is fairly well understood, having been obtained in 1903 from A-to-wa To-ho-

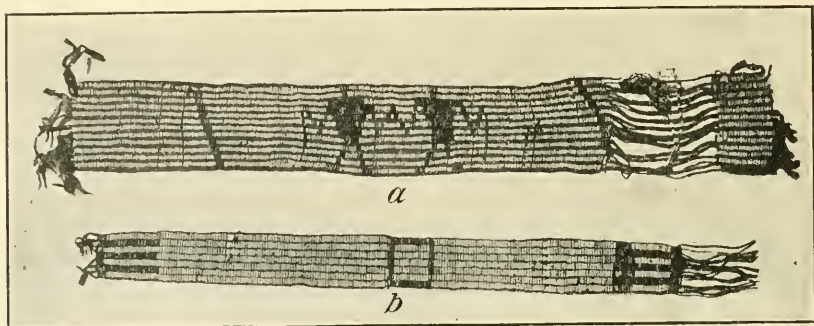


FIG. 39.—Wampum belts: *a*, Wyandot; *b*, Huron.

nadi-ke-to by Mrs H. M. Converse. The information supplied with it says that it is a treaty belt presented by the Huron to the Iroquois in 1612 at the headwaters of the Ottawa River, Canada. The central square represents the Huron nations; the purple stripes designate people, and the white designates peace, meaning that the people of both nations walk together in peace. This belt is twenty-six by two and a half inches, the weave of both specimens being as follows. Upon stout warps of tanned buckskin the cylindrical shell wampum beads are strung upon double woofs of thread, apparently of native fibre, each row of the beads alternating with the leather warps.

Still another belt of the same type is in the possession of the chief of the Huron. This belt is said also to represent a treaty of peace, having seven crosses of blue beads on a background of white. The crosses are said to indicate villages. Further historical data concerning this belt, is, however, lacking. It appears to have been smeared at some time with red paint, though for what reason I could not ascertain. The belt is shown around the owner's neck in plate VIII.

THE FOUR SEASONS OF THE MEXICAN RITUAL OF INFANCY

By STANSBURY HAGAR

A PAPER by Doctor Seler¹ called the writer's attention to a series of remarkable representations which occur in the codices Borgiano, Vaticanus 3773, and Fejervary-Mayer.² Four groups of deities are represented, each group in the performance of a different act, and all of these acts Seler rightly regards as symbolic representations of sacerdotal functions.³ In the Vaticanus and Borgiano codices there are five deities in each row, making twenty in all, while in the Fejervary there are eighteen deities very



FIG. 40.

irregularly distributed amongst these groups. The sequence is the same in the Fejervary but differs in the Borgiano. The significance of these figures is fully revealed by comparing them with the descriptions of the ritual of the Mexican twenty-day periods given by Duran in his *Historia de las Indias de Nueva España*.

"In the first row," writes Seler, "the gods are each represented as boring out, with a pointed bone, the eye of a naked human figure standing before them"⁴ (fig. 40). In the Vaticanus a severed head

¹ Venus Period in Picture Writings, *Bulletin 28 of the Bureau of American Ethnology*, p. 355 *et seq.*

² Loubat edition, pp. 15-17, 33-42, 23-28, respectively.

³ *Op. cit.* p. 367.

⁴ *Ibid.*

takes the place of the human figure. These victims are females and the idea is evidently that of sacrifice. During the thirteenth month Duran describes the slaying of two young sisters, who represent famine and plenty. Moreover the sign Sagittarius governing this month was preëminently the sign of human sacrifice in Mexico. The principal sacrifice of the year took place under it.

In the second row of figures the gods are holding up in one hand an infantile representation of themselves (figs. 41 and 42). This seems

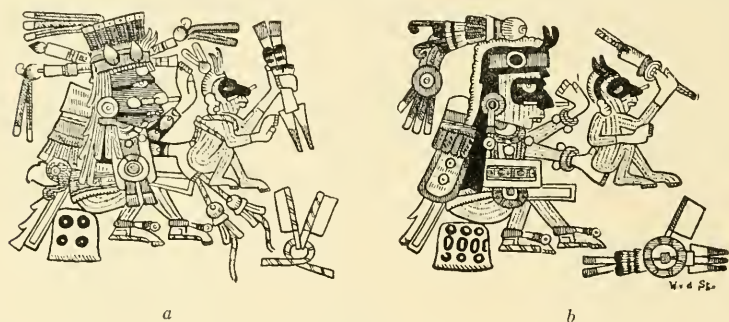


FIG. 41.

to refer to the rites of the Izcaalana or stretching out of infants begun during the eighteenth month under our sign Pisces. Parents stretched out the limbs of their children in the belief that unless this were done the children would not grow during the coming year.



FIG. 42.

Then each mother took hold of her child by the hair of its head and, lifting him upwards, addressed him frequently with the words

"Ytzcalli, ytzcalli," meaning "Hail, hail," according to the commentator on the Codex Telleriano Ramensis.¹ In reality these words probably placed the infant in the care of the gods with the declaration that its limbs had been properly stretched in the usual manner and it was therefore entitled to their protection for the ensuing year. This explains the gesture of giving mentioned by Seler in connection with this second row of deities. Nearly all the deities and infants in this row wear the black facial mask which characterizes the deities of the winter or night season of the year including the signs Sagittarius, Capricornus, Aquarius, and Pisces.

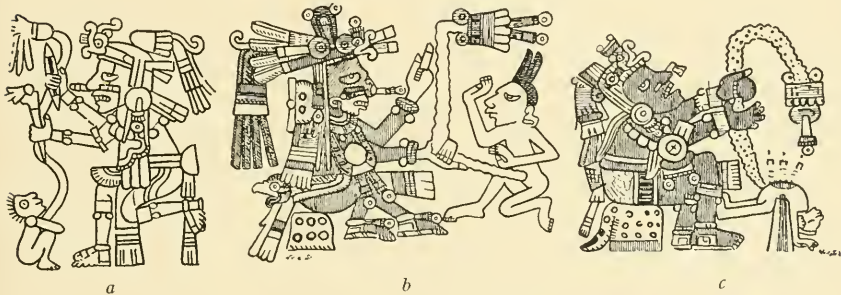


FIG. 43.

In the third row the gods hold a *tecpatl* or flint knife, with which they are cutting or are about to cut the flesh-colored navel-cord of a new-born infant which terminates in flowers and precious stones. As it was customary for parents to call their offspring "my jewel," these latter symbols evidently pertain to the child (fig. 43). In a previous paper² the writer has presented evidence that the twenty Mexican day signs govern portions of the zodiac in sequence and in this sequence the sign Tecpatl pertains to the region of our constellation Gemini. Under this sign in the fourth Mexican month Duran describes the rites of the Hueytozoztli as a purification of women who had given birth to children during the past year and as a circumcision of the infants, referring, no doubt, to a ceremonial cutting of their navel-cords.

¹ Cf. Borgiano Codex, p. 52.

² Zodiacal Elements of the Mexican and Maya Months and Day Signs, *Int. Cong. of Americanists*, Mexico, 1910.

In the fourth row five female divinities offer the breast to as many naked infants. To the left in the Borgiano appears the symbol of the emerald and of the emerald water typifying the Tianquitzli or Market-place asterism, our Virgo, and the female sex (fig 44). Probably the emerald or jewel water refers also to a

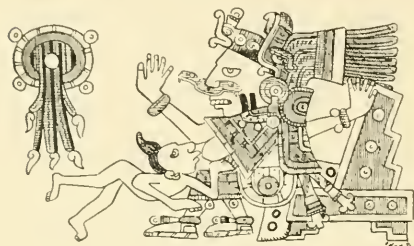


FIG. 44.

woman's milk. Under Virgo in the eighth Mexican month Duran describes a ceremony and sacrifice of the midwives and female physicians. This is the female sign of the Mexican zodiac. It is governed by the asterism of the female symbol and by the various

forms of the mother goddess, and its ritual pertains exclusively to women and their occupations. We may therefore conclude that the fourth row of divinities symbolizes the female ritual of Virgo.

This completes our study of the four rows of deities and we find them all associated with a ritual pertaining to childhood or infancy performed under our signs Sagittarius, Pisces, Gemini, and Virgo, on dates approximately equidistant. The ritual therefore represents the four seasons. Gemini governed the month of birth, i. e., the time when the birth ceremony was performed upon all infants born during the preceding year. Virgo similarly governed the month of motherhood and nursing. Sagittarius governed the month of sacrifice, and the symbolism leads us to suspect that the ritual may have referred to a sacrifice of children to ensure the safety of the other children born during the year. Finally Pisces governed the month of fruition or completion when the parents presented to the gods for their care and protection the finished reproduction of themselves.

Here the cycle of infancy ended contemporaneously with the end of the annual solar cycle. It is also worthy of notice that the four day-signs, Tecpatl, Calli, Tochtli, and Acatl, which mark the initial years of the great cycle of fifty-two years seem also to have governed the four seasons of infancy. In the Borgiano codex the

figures of these seasons are accompanied by all the day signs in sequence but in the Fejervary and Vaticanus by the five day-signs Olin, Cipactli, Couatl, Atl, and Acatl. The last four represent four seasons but one month later than the seasons of our ritual.

We may also compare with these figures the four Bacab rulers of the Maya festivals in honor of the four seasons held during the supplementary days. In this ritual as given by Landa Sagittarius was represented by Canzicnal, the Serpent Being, Pisces by Zaczini, the White Being, Gemini by Hozanek, the Disembowelled asterism, and Virgo by Hobnil, the Hollow One. In the Sagittarius ritual young boys were cut with knives; under Gemini presents were made to the deity.

That there was an intentional comparison of the annual with the infants' cycle can hardly be doubted. No student of zodiacal mythology and symbolism can fail to recognize the general and very natural comparison of the annual journey of the sun with the spiritual journey of the human soul through life, a concept which forms a very important basic element of judicial astrology if not its principal one. In Mexico the prevalence and importance of astrology are well known. The aspect of the heavens was carefully noted at the moment of the birth of an infant and his future was foretold by means of the comparative position of the various asterisms at the time. But this was an individual matter and there seems to have been a purpose of bringing the individual into harmony with the divine cycle of celestial revolution by celebrating his birth under the sign governing universal birth, his nourishment under the sign governing universal nourishment, and so on. Thus the cycle of childhood became a miniature, so to speak, of the cosmic cycle, a note in its harmony.

But this symbolism was not entirely unrelated to physical conditions. A phallic ritual held under our sign Virgo in Mexico must have tended to produce a greater than average number of births under Gemini, the birth month. It is easy to account for this human mating season, which is found also in Peru and elsewhere, as occurring in the period of rest after the completion of the labors of the harvest, but it seems rather to have been originally

a component part of the ceremonies preceding and during the harvest.

The ritual of the four seasons of infancy serves to emphasize farther how completely the Mexican ritual as a whole was associated with astronomic and astrologic relations. It indicates the necessity of understanding these relations in order to master the nature of Mexican religion and the significance of its symbolism.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES,
BROOKLYN, N. Y.

NEW ENGLAND NAMES

BY DAVID I. BUSHNELL, JR

THE following document, giving the Indian names of many rivers along the coast of New England, as well as the names of the chiefs whose villages occupied their shores, is now printed for the first time. The original manuscript is in the British Museum, London, and was copied by the writer some years ago. Ever since the discovery of the document the writer has endeavored to learn something of its origin, but without success. Neither name nor date is affixed to the original paper; nevertheless it probably dates from the early part of the seventeenth century. This appears evident not only from the style and form of the writing, but from the fact that it is preserved and associated with documents signed by Charles I, bearing the dates 1639, 1640, and 1644. The document follows:¹

(MSS. Vol. Egerton—2395—fol. 412 et seq.)

The Names of the Rivers and the names of ye cheif Sagamores yt inhabit upon Them from the River Quibequissue to the River of Wenesquawan.

¹ Smith, in his *Description of New England*, referring to the journey made by him along the coast during the year 1614, wrote:

"The principall habitation Northward we were at, was *Pennobscot*: Southward along the Coast and up the Rivers, we found *Mecadacut*, *Segocket*, *Pemaquid*, *Nuscocus*, *Sagadahock*, *Aumoughcowgen*, and *Kenebeke*; and to those Countries belong the people of *Segotago*, *Paghhuntanuck*, *Pocopassum*, *Taughtanakagnet*, *Warbigganus*, *Nassaque*, *Masherosqueck*, *Wawrigweck*, *Moshoquen*, *Wakcego*, *Pasharanack*, &c. To these are alied in confederacy, the Countries of *Ancocisco*, *Accomynticus*, *Passataquack*, *Aggawom*, and *Naemkeck*: All these for any thing I could perceive, differ little in language, fashion, or government, though most of them be Lords of themselves, yet they hold the *Bashabes* of *Penobscot*, the chiefe and greatest amongst them.

"The next I can remember by name, are *Mattahunts*, two pleasant Iles of Groves, Gardens, and Corne fields a league in the Sea from the maine: Then *Totant*, *Massachusset*, *Topent*, *Secassaw*, *Totheet*, *Nasnocomacack*, *Accomack*, *Chawum*, *Patuxet*, *Massasoys*, *Pakanokick*: then *Cape Cod*, by which is *Pawmet* and the Ile *Nawset*, of the language and alliance of them of *Chawum* . . ." (Smith. *Generall Historie*. London, 1627, p. 208.)

FIRST there is Quibequissue upon the East syde whereof dwelleth Aberemite and upon the West syde Astighco.

The next is Panawabsack described to be a great River.

The next is Pemaquid or Segakett and there dwelleth the Bashabe.

Then there is Ramassouk or Ramussouk and there dwelleth Sebathahood.

The next is Panawapaske or Nepammocagan where dwelleth Aramasoge.

Then there is Apumcossock where did Dwell Abecogissick Amenqum and Nedicomokin.

Then you have Aponegeg and there did dwell Mentoermitt Hamerhow and Esabany.

The next is Sagadahock and that Divides it self into two great Branches the one Running to thee northwest the other to the north East. To the West did Dwell Agamaquos Amorcogant and Samowessa two Brothers. But I have forgotten the Rivers name. to the northwest dwelt Apumhamon Sassanow sawes and Ochowomakin. To the north East did dwell Ochoworth and Ocockhamus. And at ye River head above the Lake, Baccadossom.

Then there is Sawaquatock and there did Dwell Agemohock.

Then you have another River called Wedopekeg where dwelleth one Agee whahasnon.

Next unto this is a great Broad River or bay upon ye west Syde whereof, there was one Squamiock that was ye cheif Sagamore, the Rivers name is Merimack as I take it.

These Rivers you are to take particular notice of wth their Sagamores as farr forth as possible shall be able and so to cause them to be Artificaly set Downe in yor Card as you find them with their true distances one from ye other, as also the Island of Teponege. For these I make Account bee all of them to ye eastward of Cape Code with many others.

To the West of Cape code (as in yor Instructions is said) you shall meet with Severall Islands as namely Natcea, Ioncanoke, Akeucanack and Capawick wch is the Largest of them all and wch hath upon the north syde thereof Towards the Mayne 3 Rivers, ye Eastermost is Sasquiaca.

The next is Quatanque, the last is Weiwyout.

At the Eastward end there is another River but evill coming to it by reason of thee Slates and Sands and that is called Whackwhigh (and the Sogum) for here they are not called Sagamores as before. This name was Wavenot who Commands all that part of the Island as doth

Tadosheme the middle part, who doth Command the west part I have forgotten but hee hath been enemye to both ye other two if I be not mistaken.

These Islands use yr best Diligence to make a perfect discovery of as also ye land to the North of them according to y^{or} Instructions for there is great hope they will afford matter of good Consequence, but you will find thee people very false and Malitious in which respect you must bee the more cautious how you deal with Them, they are plentiful in Corne and Tobacco but have not many Scinus (?) if you cannot otherwayes Deale wth them, first making Tryall of all Fayr Courses, then do yor best to Seize their Corne and provision for that will inforce them to commerce and supply their wants and necessities espetially when they see they cannot offend you but that you are still offensive unto them.

In coming along y^e Coast I could wish to endeavor to take with you (for to bee y^{or} Guide or interpreter) Mentoermit who is the onely Traveller in all those parts That I have heard of and hath y^e opinion of a very honest man and one that doth understand many of their Languages.

I could Speak of other places more westerly but that I leave to y^{or} Industry to find out at y^{or} best leisure.

End

Many maps of the shores of New England have been examined in the endeavor to identify the streams named in the foregoing document, but it has not been possible to locate all. Nevertheless enough have been found to prove the authenticity of the document. Some of the names not identified may have been applied to smaller streams.

Beginning at the north, the rivers mentioned in the paper are:

1. *Quibequissue*. The name Quinobequin appears on the Dutch map of Novi Belgii, 1671. The stream to which the name is attached is the largest on that part of the coast, and is placed about where the Kennebec should be, but the latter is not mentioned, and the stream here referred to lies eastward of the Penobscot.

2. *Panawabsack*. Probably the Penobscot.

3. *Pemaquid* or *Segakett*. "Pemmaquid" appears on the map of Novi Belgii, 1671, and east of it is "Segocket," separated by several other names, showing them to have been regarded at that time as two distinct streams.

4. *Ramassouk* or *Ramussouk*. Not identified.
5. *Panawapaske* or *Nepammocagon*. Not identified.
6. *Apumcossock*. Not identified.
7. *Aponegeg*. Not identified.

8. *Sagadahock*. This is the present Kennebec, and its ancient name has been preserved in that of Sagadahoc County, Maine. Sagadahockleek is found on the *Novi Belgii* map of 1671; Sagadahok or Kinibeki on the *d'Anville* map of 1755; Sagadahok on the Lotter map of 1784.

9. *Sawaquatock*. The present Saco. It is given as Sowocatuck on the map of *Novi Belgii*, 1671, and as Sawokotuk on the *d'Anville* map, 1755.

10. *Wedopekeg*. Not identified.

11. *Merimack*. The present Merrimac, in Massachusetts and New Hampshire.

The rivers *Sasquiaca*, *Quatanque*, *Weiwyout*, and *Whackwhigh*, on the island *Capawick*, are not identified.

Cape code, is, of course, Cape Cod.

The island *Teponege*, "eastward of Cape Code" is not identified.

Four islands are named "To the West of Cape code":

1. *Natcea*. This is probably Nantucket. On the map of *Novi Belgii*, 1671, it appears as Nattocke.
2. *Ioncanoke*. Not identified.
3. *Akeucanack*. Not identified.
4. *Capawick*. This being "the Largest of them all" is unquestionably Long Island.

"Mentoermit, who is the onely Traveller in all those parts" evidently lived on the *Aponegeg*, together with Hamerhow and Esabany. This stream, although not identified, appears to have been just east of the present Kennebec, perhaps the present Sheepscot, a noted Indian resort in early days: Mentoermit was probably an Abnaki.

No attempt will be made to identify any of the many names of individuals mentioned in the document; some may occur on treaties or in early narratives; others may be known locally, but it would require one well acquainted with the country to recognize them.

ABORIGINAL REMAINS IN THE CHAMPLAIN VALLEY

SECOND PAPER

By G. H. PERKINS

IN a former paper, published in this Journal (vol. xi, pp. 607–623) the writer described a portion of the aboriginal remains which have been found in the region which may be fairly included in the Champlain Valley.

It is the design of the present paper and of another to follow to complete what has already been written by some account of several classes of objects not included in the first paper. It is important to preserve and discuss the specimens found in the region named, because, here, as indeed in many another locality, the accumulation of any considerable number and variety of stone and other objects that were made and used by the ancient occupants is no longer possible. This is eminently true of a long and well settled area and one much visited by tourists as is that here considered. As indicated in the first paper, the only collections of much value that have been made in the Champlain Valley are: that in the Museum of the University of Vermont, which is by far the most important, that in the state collection at Montpelier, and that at Amherst College, collected on the west side of the Valley by the late Dr Kellogg.

In the former paper there were considered, Chipped objects, Gouges, Celts, Earthenware, Bone, Copper and Iron. In the following pages there will be considered Grooved Axes, Problematical Stones—bird stones, two-hole stones, boat-shaped stones, etc.—and Pipes.

All of the specimens figured and most of those mentioned are now in the two Vermont museums.

GROOVED AXES

Grooved axes in a great variety of form and size, and of all degrees of elegance, have been obtained from the soil of this region.

Some are of the simplest and rudest character, shaped apparently with the least amount of labor while others equal our finest specimens in perfection of form and finish. Most of these axes are well made and give abundant evidence of the care and labor expended in their shaping from the flat, oval quartz pebbles from which they have been produced. The simplest are merely flat pieces of quartzite or other hard stone, even sandstone being occasionally used. Roughly shaped and notched only on the edges, these rude implements may have been often used as hammers rather than as axes and yet they have the ax form. Plate XII shows several forms and examples of the best of our Champlain Valley axes.

Most of these, as is true of all similar specimens, are so completely worked over the surface that it is not always possible to determine whether they were made from drift pebbles or from material broken from some nearby ledge. The specimen shown on the plate at the top, however, is very obviously made from a quartz pebble, water worn, and worked only so far as necessary to adapt it to its purpose. The smaller ax at the right of this is also obviously made from a pebble and probably also that at the lower right-hand corner, but the other two are not so plainly of the same sort. As the figures show, our better axes are ground or rubbed over the whole surface. At first, usually, the stone selected was hammered or pecked into the desired form and then rubbed smooth, but, when the ax was made from a pebble, the smooth, water worn surface was retained as far as possible. As the figures show, our axes differed materially in form from those of the west and south or even from those of the Ohio Valley. None are as large as some from these other localities nor do we ever find those in which the upper portion, that above the groove, is conical or pyramidal.

On the average, our axes are not more than six to eight inches long and three or four wide and they do not weight more than three or four pounds. Somewhat larger specimens occasionally occur, but none greatly exceed the dimensions given.

Clumsy and inefficient as these dull-edged tools seem to us they appear, nevertheless, to have been quite serviceable in the hands of those who knew how to use them. In speaking of a temporary encampment which his Algonkin companions made on one of the

large islands in the lake which bears his name, Champlain tells us that they built a barricade and cut "gros arbres" with "meschantes haches" for this purpose. As this was merely a stop of a single night it is not probable that these Indians wasted any great amount of labor upon the structure they had thought it necessary to make.

In all the best axes the groove is well defined and encircles the implement. As the figures show, the groove is sometimes near the middle, sometimes near the end opposite the edge. In the most perfect specimens the groove is as seen in the three lower figures of plate XII, but it may extend only across each end as in the two upper figures. It is rarely if ever made about three sides only, the fourth being left flat, as in specimens found in other places. I have seen but one specimen of this sort in our collections and this is doubtfully from this region.

Naturally, because of the labor of making them, the grooved axes are by no means as common as the celts. Indeed, finely wrought stone axes are among our least abundant specimens. In no part of this region have more than three or four been found in a single locality and usually only one or two.

PROBLEMATICAL OBJECTS

This name has been proposed, as it seems to me most wisely, to include a group of quite heterogeneous specimens, some of which may have been, and very probably were, used as amulets or charms, others as emblems of one sort or another, others as ornaments, while the design of some can not be conjectured with probability.

As every reader of archeological articles knows, a great variety of names have been assigned to these objects, some of them undoubtedly fanciful, others probably indicating the use to which this or that specimen was put. Some of these common names will be used, but without the intention of expressing thereby any certainty that the term applied is entirely correct. Unless found in an unfinished condition, these objects are all well shaped, finely finished, and were evidently considered by the makers of sufficient importance to be worthy of their best efforts.

The material of which they are made is usually fine in grain and attractive in color. The kind of objects of which I am writing

is well exemplified in plates XIII-XV. The figures given on these plates show a large part of the best specimens of this class that have been found in the Champlain Valley. If this is true it follows that only a few have been obtained. It is probable that no large number of these objects was ever in existence, but that always they were the few cherished treasures of their owners. The plates show also how great a variety in form exists, and there is also variety in the color and character of the materials selected from which they were fashioned. All are of rather small size, only a few inches in length or breadth and usually much less in thickness.

It is noticeable that none of our Champlain Valley specimens so closely resemble those of similar character found west or south as do these problematical forms. In many cases exact duplicates of specimens from mounds or graves, or from the surface soil, in the Ohio or Mississippi valleys or even on the Pacific Coast have been found here. From this it appears that these forms were more generally distributed and passed from tribe to tribe more commonly than other objects. It is also noticeable that while duplicates of our specimens are found in many and sometimes distant localities we find within our own area few duplicates, but rather some peculiarity in almost every specimen. While the general term "problematical stones" includes all the forms here mentioned, it will be convenient to subdivide the whole group, using well known names.

1. Flat Perforated Stones or Pierced Tablets

Regularly shaped pieces of slate, schist, etc., now and then occur in this region. Some of them may be incomplete and perhaps one or more holes would have been made had they been finished, but some appear finished as they are. Most of the flat specimens are perforated, as in the middle figure at the top, and the left figure at the bottom of plate XIII and figures 8, 11, 12 of plate XIV. Sometimes a little convex on one or both sides, these stones are more often quite flat and thin. As shown, there may be one or two holes, apparently for a thong by which the object could easily be hung or in some way attached to the person of the owner. In size these vary from six inches long, which is an unusual size, to two inches in length and about half as much in width. The specimens shown on

the plates are from one half to one third full size. In all, the hole or holes, there are never more than two, are reamed out on one side to about twice the diameter on the opposite side. The specimen figured at the bottom of plate XIII though thicker and heavier than other specimens may most properly be placed with those now under consideration. This, apparently a pendant, is of steatite, quite thick and, as may be seen, there is a wide bevel along each edge. The opposite side is flat.

2. *Winged Stones*

These are as carefully wrought as any specimens that we have. They are also about as rarely found as any. Figures at the top, corners of plate XIII, figure 10 of plate XIV and figures 1, 2, 3, and especially 9, of plate XV give good examples of these singular objects. They have been called, "ceremonial stones," "banner stones," etc. It has also been supposed by some that the large perforation seen in all these specimens was for the reception of a reed or handle of some sort in order that such an object might be used as a baton or scepter. Some of these are of comparatively soft stone, as slate or limestone, but some are of quartz or other very hard material and the difficulty of working these into shape must have been great. Whatever the purpose of these winged specimens they must have been considered of great importance by those who with so much labor worked them out. Most of the specimens figured are about half full size. The surface is always very smoothly ground and often polished. In some the sides are alike as they are in the upper figures on plate XIII. In other cases, one side is convex and the other concave, as in figure 2 of plate XV.

The specimen shown in figure 11 of plate XV is probably an incomplete form of those mentioned. It is of gray quartzite and in its present condition is quite rude. The specimens shown at the upper corners of plate XIII are quartz, 1, 3, 9 of plate XV are slate, while 2 is granite.

3. *Pick-shaped Stones*

One or two very rude examples of this form have been found, but only a single fine specimen, that shown in figure 7 of plate XV has been seen. This is perhaps unfinished. At any rate it is not

smoothed over the surface as are most of the specimens of this sort. It is of green stone, well formed, but not perforated. The entire length of this specimen, measured from point to point, is $8\frac{3}{4}$ inches and its width in the middle is $1\frac{7}{8}$ inches. The thickness in the middle, from which the surface is bevelled in both directions, is $1\frac{3}{4}$ inches.

Specimens of small pick-shaped stones almost exactly like those figured by Dr Beauchamp and made from the same striped drab and black slate are found here though rarely. They are apparently more common in New York where Dr Beauchamp's specimens were found.

4. *Boat-shaped Stones*

As has been repeatedly noticed of other problematical forms, boat-stones are rare in the Champlain Valley. Those specimens that do occur are of very fine material and elegantly formed and finished. Plate xv, figures 5 and 6, plate xiv, figures 9 and 13, are examples of these. That seen, very much reduced, on plate xiv is the largest that I have seen. It is made of a hard, gray, black lined, silicious stone. It is, as in all these specimens, excavated underneath and perforated by two holes. It is nearly $5\frac{1}{2}$ inches long and, at the middle, $1\frac{1}{2}$ inches high.

5. *Bar Amulets*

Objects that for lack of a better name have been called by that given are also found here. For some reason they are not as carefully made as are the boat-stones nor are they usually perforated. One found in a grave at Swanton made of red slate and more finely finished than any other has the two holes always seen in the boat-stones, but I do not remember that any other is perforated.

In size these bar-shaped stones vary greatly. Our largest specimen is $8\frac{1}{2}$ inches long, $1\frac{1}{4}$ wide, and $\frac{3}{4}$ high in the middle, from which the surface slopes in both directions. The smallest is only $3\frac{1}{4}$ inches long and very slender. Most of these are flat on the under side and not at all excavated, but in one or two cases there is a small concavity.

6. *Bird-Stones*

Specimens which may be included under the above name are exceedingly uncommon in the Champlain Valley. The specimen shown in figure 4 of plate xv is unique here, for I have not seen another like it, though very similar forms are found west and south. The specimen figured is of a very pretty calcareous breccia, not very hard. It is perfectly shaped and finished, the surface is smooth, almost polished, all the edges are sharp, and there is no evidence of use. Through each end there is a small hole drilled obliquely so that it comes out below. This object is $4\frac{1}{4}$ inches long, and 2 inches high. The base is $1\frac{7}{8} \times \frac{3}{4}$ inches and, as may be seen, is rectangular and flat. A more decided effigy is that shown at the bottom of plate XIII. This was found in one of the Swanton graves and the dark upper part is colored green by copper carbonate from implements which were buried in the same grave. Some of these are figured in the former paper. The material is a hard, light-colored limestone. The base is pierced by a hole at each end. The surface is somewhat eroded, but was evidently well polished originally. The base is 3.15 inches by 1.3 inches and the height from top of head 2.65 inches. In a neighboring grave another of these objects was found. This is of red slate and is of about the same size as that figured, but of somewhat different proportions, the base being longer and the head pointed at the end.

7. *Pendants, Plummets*

Much more frequently occurring in our finds than the objects already mentioned are stones such as those shown in the figure to the left of the discoidal on plate XIII and figures 1-7 on plate XIV. It is quite likely that most of these were used as ornaments and others for different purposes, the ruder forms perhaps as net or line sinkers. Many of these objects are exceedingly well made and could scarcely have been intended for common use. Yet some of them, while regularly and carefully shaped, are not as carefully smoothed as one would expect in an ornament. The material selected for these stones is as varied as is the form. Some are of hard silicious stone, some from that which is softer and schistose.

In size these specimens are more uniform than are most of our

objects in any given class. They are none of them large, but average 3 or $3\frac{1}{2}$ inches in length. Some are larger and the longest which I have seen is $4\frac{1}{2}$ inches. Most are flattened on two sides, but some are nearly or quite cylindrical. The illustrations show well the different forms which have been found. The figures are rather less than one third full size.

8. *Discoidal Stones*

Only a single specimen of this sort has been found, unless we include several very rude specimens which we must suppose to be unfinished. This is figured in the center of plate XIII.

As the figure shows, this is a fine specimen of its kind. It is made from white quartz and is a most admirable piece of stonework. Each side is cupped, as seen in the figure, and the edges strongly convex. Its diameter is 2.75 inches and its thickness at the rim of the depression 1.1 inches. No such specimen has been found near the surface, this being taken from one of the graves explored many years ago at Swanton. Apparently these graves were very old, some of them being beneath large pine trees. Indeed this burial place was not discovered until the pine forest growing above it was cleared off and the sandy surface, being by the clearing exposed to the wind, was in places removed and graves disclosed. This led to careful examination of the locality and the discovery of a considerable number of specimens of stone with a few of copper and shell. The writer described this burial place some years ago in the *Proceedings of the American Association for the Advancement of Science*, vol. XXII, pp. 76-100.

It is quite possible that the specimens figured on plate xv, figs. 8 and 10, should not be classed with the rest of the objects shown on the plate, but they are certainly problematical forms. That shown by figure 8 is of drab slate. Its surface is smoothed, but not polished. It may have been some tool for smoothing earthenware or rubbing skins, or it may have been an ornament. Several have been found, all very much alike. They are not thin enough to be fragile, but are not clumsy. They are four or five inches long and two wide.

Figure 10 has the form of some of our slate knives, but this is

of nearly uniform thickness throughout and there is no indication that an edge was contemplated by the maker. It is simply a thin, flat bit of red slate shaped as seen and ground smooth over the surface. The figure is about one half full size.

PIPES

On plates XVI and XVII there are figures of twelve of the stone pipes that have been found on the eastern side of the Champlain Valley. Other forms have been obtained on both sides of the lake, but the figures here shown will suffice to quite fully represent the forms found. As the writer has elsewhere described and figured several of the pipes of this region it will not be necessary to enlarge upon this part of the subject.

With the exception of the tubular pipes, of which an example is plate XVII, figure 1, all of our pipes are of quite small size, those figured being shown about half full size.

It is scarcely necessary to say that all are carefully and skilfully made. The material is mostly steatite, or other rather soft stone, as gypsum, of which the pipe in the lower left corner of plate XVI is made. This material is not found in this region, and like catlinite, one pipe of which has been found, it must have been brought from a distant locality. As will be noticed, three of the pipes figured are made with a stem as was most common in pipes of earthenware, as shown by figure 5, plate XVII, though other forms also are found in the earthenware pipes.

Only one platform pipe has been found, figure 2, on plate XVII. It is noticeable that the only attempts to imitate the human face that have been found in the Champlain Valley are seen in the two pipes figured on plates XVI and XVII. The face carved on the black steatite pipe shown on plate XVI is too rude to indicate much of the nationality of the model if there were any, but that shown on the pipe in figures 3 and 4 of plate XVII is evidently intended to represent a European. The face is rude, but nevertheless is not without considerable expression. So, too, the only animal effigy that I have seen from this region is that shown in the pipe at the upper left-hand corner of plate XVI. The almost entire absence of any such effigies in the Champlain Valley adds interest to these three specimens.

The pipe figured on plate XVII, figures 3 and 4, is of yellowish steatite wholly unlike any stone found in this vicinity. It is regrettable that it was not made from harder stone, for the finder has scratched letters upon it, much to its injury. Like several of the pipes it has near the lower edge a small hole apparently for suspension by a cord. The total height is $2\frac{3}{4}$ inches, width $1\frac{5}{8}$ inches at the lower part, thickness at the top $\frac{3}{4}$ inch. It was found many years ago in Addison County and until lately has been an heirloom in the family of the finder. It is shown in figure 4, plate XVII, about three-fourths full size, while figure 3 is the same a little enlarged. Probably a hollow reed was the most common stem for these pipes, but the humerus or other long bone of some small bird was also used. I have a pipe from California in which the stem is still in place and it is a humerus of a bird about the size of a dove. I have spoken above of the use of catlinite pipes in this region. I know of only a single specimen. This is of larger size than any of those figured and is more modern in appearance, though it was plowed out of quite a depth of soil.

The remaining pipe, which is shown about two thirds full size in figure 1 of plate XVII, is of very peculiar form for an eastern specimen. On the Pacific Coast tubular pipes are not uncommon and here in a limited area on the eastern side of the Champlain Valley about a dozen have been found. They are all large, though varying in length from 13 inches to 7 inches. Most of this form have come from the graves in Swanton already mentioned, but a few have been found in other, but not distant, localities. As the figure shows, the bore at one end is as large as the size of the tube allows. At the opposite end the hole is reduced to half an inch in diameter and in several there was a loosely fitting stone plug. All are not exactly of the form of figure 1 of plate XVII but some are more like a ball club: others taper somewhat from the end where the bore is small. Still there is not great diversity in the appearance of all. It is interesting to note that besides the stone tubular pipes somewhat similar ones are found made of earthenware. Most of the pipes of earthenware, however, are shaped more like the stemmed forms as in figure 5 of plate XVII or those shown on plate XVI at the lower left hand. The first of these is of earthenware; all the others are stone.

Perhaps the writer may be allowed to add in closing that he has noticed the various specimens figured not because of any remarkable peculiarities they possess, but because they show something as to the nature and style of the objects used by the Iroquois and Algonkin occupants of the Champlain Valley. Specimens very nearly like those figured here have been found, and often in far greater number, in the west and south, as anyone may see by examining the collections of some of our museums or by consulting the numerous figures given in Mr Moorehead's most valuable *Stone Age*. From this it seems probable that most, at least, of the problematical forms had their origin outside of New England, and that either the objects themselves were imported from farther west, or those made elsewhere were imitated by the Indians of the Champlain Valley. Probably some of the forms originated here but the close resemblance of most to those found far more abundantly elsewhere suggests importation to a considerable extent.

It may be well to add that some of the tubular pipes and the last mentioned bird-stone are now in the American Museum of Natural History, New York City.

UNIVERSITY OF VERMONT,
BURLINGTON, VT.

THE PROBLEM OF NOUN INCORPORATION IN AMERICAN LANGUAGES

BY EDWARD SAPIR

THE term "incorporation" has been much used in discussion devoted to the structure of American languages. Despite the steadily growing mass of American linguistic material, a good share of the data presented in the last few decades being distinctly superior from the point of view of critical analysis to much that served as illustrative material in earlier days, it can not be asserted that the term is always clearly understood or satisfactorily defined. This paper is not at all concerned with whether the linguistic stocks of America are or are not as a whole characterized by a process that may be called "noun incorporation," but aims merely to give a usable definition of the term and to show that several of these stocks actually make use of the process. This may not seem a very revolutionary attempt, nor is it intended to be. As, however, Dr Kroeber has undertaken in a recently published paper¹ to demonstrate the mythical or, at any rate, theoretically unlikely character of noun incorporation, it seems in order to accept his implied challenge and to present some new data by way of rebuttal.

On two or three negative points all must be in hearty agreement with Dr Kroeber. In the first place so-called pronominal incorporation and noun incorporation stand in no necessary relation to each other. A very large number of American, as of non-American, languages make use in the verb of affixed elements of pronominal signification; they are, as regards their syntactical use, very commonly subjective, less frequently, though by no means rarely, also objective, and still less commonly they indicate also dative, ablative, or other case relations (thus, in Wasco, "him" and "me" in "I give it to him" and "he takes it from me" are as thoroughly "incorporated" into the verb-complex as are the

¹A. L. Kroeber, "Noun Incorporation in American Languages," XVI. *Internationaler Amerikanisten-Kongress*, 1909, pp. 569-76.

subjective "I" and "he" and objective "it"). As Dr Kroeber points out, it is incorrect to consider these pronominal elements as truly "incorporated" forms of independent personal pronouns; being either simpler in form than the latter or, often enough, etymologically unrelated to them, they are best considered as formal or inflectional in character. Whether or not they may, in particular cases, be thought to have been originally independent elements that have, through an intermediate proclitic or enclitic stage, coalesced with the verb stem into a morphologic unit, matters not at all; historical considerations should not interfere with a descriptive analysis, otherwise morphologic change in language ceases to have a meaning. In the case of the Wasco¹ sentences referred to before, the "incorporated" elements *-n-* "I, me," *-t-* "it," and *-i-* "him," are evidently not actually incorporated forms or secondary developments of the corresponding independent personal pronouns *náika*, *lǎḡka*, and *yáḡka*, while *-tc-* "he" (as subject of transitive verb) is quite unrelated to the independent pronoun. Few more striking cases can be found than that of Takelma. Here we have no less than eight distinct affixes to indicate the first person singular ("my, I, me") in the noun and verb (*wi-*, *-t'ek'*, *-t'k'*, *-t'eʷ*, *-t'eʷ*, *-n*, *-n*, *-xi*), yet not one of these is etymologically related to the independent pronoun *gi'*. Clearly, then, the incorporation of a noun or noun stem into the verb is not in most cases analogous to pronominal "incorporation." It may even be argued on general grounds that nominal and pronominal incorporation tend to be mutually exclusive processes. The main purpose of a pronominal affix is to refer to or replace a substantive, in the former case often determining also its syntactic relation; hence a pronominally incorporating language should find noun incorporation unnecessary, and *vice versa*. The fact that this theoretical conclusion is by no means entirely borne out by the facts shows how little reliance is to be placed in *a priori* considerations. We shall find, however, that noun incorporation can indeed exist without true pronominal incorporation or rather inflection.

In the second place it is clear that verbal affixes that refer to nouns, in other words, convey a substantival idea, are not instances

¹ Of Chinookan stock.

of noun incorporation if they are etymologically unrelated to the independent nouns or noun stems with which they seem logically connected. Such affixes are generally either instrumental (Siouan, Shoshonean) or local (Kwakiutl, Salish) in character, but may also be employed to represent the logical object or even, in the case of intransitive verbs, subject (this use is characteristic of Kwakiutl, Chemakum, and Salish). As long, however, as they are lexically distinct from noun stems proper, they must be looked upon as grammatical elements pure and simple, however concrete their signification may seem. They are logically related to independent nouns of the same or allied meaning as are tense affixes to independent adverbs of time. This working over of substantival concepts into the verb-unit as derivational rather than compositional elements is decidedly characteristic of several American linguistic stocks; it belongs rather to the sphere of "polysynthesis" than noun incorporation. It is true, as Dr Kroeber points out, that body-part ideas are particularly apt to receive such grammatical treatment, yet it is decidedly misleading to imply, as he does, that body-part affixes generally form a closed class entirely apart from all others. In Siouan the idea of instrumental *activity* is far more strongly developed in these elements, here prefixes, than that of reference to distinct body-parts. Thus Ponka *pa-* means not so much "with the hand" as "by pressing with the hand," while Ponka *ma-* and *mu-*, Dakota *ba-* and *bo-*, refer to no parts of the body at all but to instrumentality apart from the body, being respectively translatable by "by cutting, with a knife" and "by shooting"; similarly, Ponka *na-* is rendered "by heat, by fire."¹ It is very doubtful whether, to use Dr Kroeber's own example, Dakota *ya-* contains a more specific reference to "mouth" than does Ponka *na-* to "fire." In southern Paiute, a Shoshonean dialect, we have, as in Siouan, a set of instrumental prefixes referring to parts of the body, though such reference is rather clearer in the case of Paiute than in that of Dakota or Ponka. As in these latter, so also in Paiute the instrumental prefixes are etymologically unrelated

¹ See Boas, "Notes on the Ponka Grammar," 15^me Session du Congrès International des Américanistes, 2, p. 328; Boas and Swanton, Siouan, §13 (*Handbook of American Indian Languages*, 1, pp. 902-905).

to the noun stems that express the corresponding body-part concepts. Examples are *ta-* "with the foot" (noun stem *nam̐a-*), *q̄i*¹ "with the teeth" (noun stem *taŋwa-*), *ma-* "with the hand" (perhaps ultimately related to noun stem *mo̐o-*), *tco-* "with the head" (noun stem *t̄*² "tsi-"). It is important, however, to observe that with these body-part prefixes are necessarily to be grouped a number of other instrumental prefixes in which the reference is to a noun other than one defining a part of the body or to mode of action not very definitely connected with a particular object. Such are *ta-* "with a missile, by throwing," *tsi* "with the point of a long object, with the end of a stick," *wu*² "with the edge or body of a long object, with any part of a stick but the point," *qu-* "with fire, by burning." The "substantivals," furthermore, of Salish and Kwakiutl include not only body-part elements but also such as have reference to other important noun concepts, such as "fire," "house," "round object."

It becomes evident, therefore, that Dr Kroeber's attempt to set off body-part elements as such from all other substantive affixes is not well justified by the facts. There is, it is true, a tendency in America to emphasize body-part relations and activities, yet this tendency is fundamentally of psychological, not morphological, interest. There is, then, no reason why noun stems denoting parts of the body should not be accepted as evidence of noun incorporation under the same circumstances as those under which other noun stems are so accepted. The main point to be determined in any particular case, as far as noun incorporation is concerned, is not whether instrumental, local, objective, or other substantival affixes do or do not refer to parts of the body, but whether or not they are identical with or closely related to independent nouns. According to Dr Kroeber, "an acquaintance with any number of American languages and with the parts which ele-

¹ *i* is used to represent a high back unrounded vowel, practically unrounded close *u*; it has by other students been heard as an obscure or imperfectly articulated front rounded vowel and accordingly written *ü* or *ö*. There is in Ute a true *ö*, corresponding to southern Paiute *o*, as well as this *i*. *ŋ* is ng of English sing.

² *u* is a phonetic variant of *i* and is found particularly after labial consonants. It is not quite so high as *i* and seems to have a slight amount of inner rounding; it is sometimes difficult to distinguish from *A* (English *u* in *but*).

ments of this class play in at least some of them, brings so strong a conviction of their peculiar qualities, that even the apparent *direct objective use of independent noun-stems denoting parts of the body in single-word verb-complexes*¹ seems dependent on the unique character of these stems, rather than as being true noun-incorporation."² This conviction is not shared by the present writer, to whom noun incorporation seems of fundamental interest rather as a formal or morphological than lexical or psychologic process. The importance of bearing clearly in mind the great formal difference between body-part elements etymologically distinct from noun stems and incorporated body-part noun stems will become evident when the body-part prefixes of Takelma are discussed.

On a third point one can not but unqualifiedly agree with Dr Kroeber. Many American languages form denominative verbs from noun stems by means of various derivative affixes of verbal, generally transitive, meaning. Thus, from Paiute *qani*- "house" are formed *qanintcu*- "to build a house" and *qanix^yai*-³ "to have a house," from Yana *hauyauba*- "deer fat" is formed *hauyauba^ε-inigui^εa*- "to contain nothing but deer fat." In these derivative verbs the nouns "house" and "deer fat" can not be considered as incorporated, for the verbal elements *-ntcu*-, *-x^yai*-, and *-^εinigui^εa*- are not verb stems but verb-forming affixes morphologically comparable to English *-ize* in verbs of the type *materialize*, *pauperize*. It can hardly be maintained, however, that verbs of this type have had much to do with a belief in the existence of noun incorporation, the process that they illustrate being a familiar one in Indo-Germanic. Eskimo, a language particularly rich in suffixes that verbify nouns, has been termed polysynthetic, but has not been employed by serious students as a source of examples of noun incorporation.

What, then, is noun incorporation? Dr Kroeber defines it as follows:—"Noun incorporation is the combination into one word of the noun object and the verb functioning as the predicate of a sentence."⁴ This definition seems acceptable enough at first

¹ Italics mine. These italicized words practically define objective noun incorporation for a limited class of nouns.

² Kroeber, loc. cit., p. 572.

³ x^y is palatalized x, approximately as ch in German ich.

⁴ Kroeber, loc. cit., p. 569.

sight, and there would be no great difficulty, on the basis of it, in proving the existence of noun incorporation in America. Examining the definition, we find that two things are required—a noun must combine with the verb-predicate into a word-unit, and the noun so combined must function as the object of the verb. The first requirement is morphologic in character, the second purely syntactic; in other words, the first calls for a certain type of word formation, while the second demands that a particular logical relation subsist between the two independent elements that enter into this word formation. Without denying the abstract right to set up such a definition, it would seem that the combining of a morphologic requirement with an independent syntactic one yields, on general principles, a definition of too narrow a scope for the discussion of as fundamental a problem as noun incorporation is felt to be. Noun incorporation is primarily either a morphologic or syntactic process; the attempt to put it under two rubrics at the same time necessarily leads to a certain amount of artificiality of treatment. A parallel case will make clearer the point here raised. Noun composition may be defined as the combining into a word of two independent words or stems, the resulting word being treated as a noun. There is no limitation put here on the syntactic relation between the two elements of the compound. "Steam-engine," "concert-singer," and "song-writer" are morphologically of one class, all three examples consisting of two nouns united into one, the first serving in some way or other to qualify the second. Yet the syntactic or logical relation that obtains between the two members of these compound nouns is different in each case. In the case of "steam-engine" the word "steam" may be looked upon as connected instrumentally with "engine," "steam-engine" being thus logically equivalent to or the substitute of the more definitely syntactic "engine that runs *by means of* steam"; "concert," on the other hand, defines "singer" locatively, in other words, "concert-singer" is the logical equivalent of "singer *in* concerts"; "song," finally, is logically the object of "writer," the last compound noun given being the equivalent of "one who writes songs." In short, we have in these nouns examples of one type of word morphologically, of three types (instrumental, loca-

tive, and objective) syntactically or logically. At this point it may be objected that it is artificial, from a grammatical point of view, to assign to the first members of the three compounds selected a definite syntactic value, the ideas of instrumentality, location, and the objective relation being given no grammatical expression but being implied on purely logical grounds. No doubt there is reason for such an objection, but precisely the same argument may be employed in dealing with verbs in which the verb stem is modified in some way by a noun stem coalescing with it. If we form three verbs parallel to the compound nouns we have selected, "to steam-run," "to concert-sing," and "to song-write," it is evident that "steam," "concert," and "song" are respectively related to the verbs "run," "sing," and "write" as noun of instrument, locative noun, and direct object. These relations are, however, just as purely logical, non-grammatical, in the case of the verbs as in that of the nouns. As far as *grammar* is concerned there is not the slightest reason why "to song-write" or "steam-engine" should not be understood to mean "to write by means of a song" or "engine built of steam"; the absurdity of interpretation in these cases is only a logical one. It so happens in English, as in most or all Indo-Germanic languages, that verbs of the type "song-write" or "steam-run," that is, compound verbs in which the first member of the compound is a noun, are not readily formed or are not formed at all.¹ There is, however, not the slightest theoretical reason why such compound verbs should not exist; that they do exist will have become clear before the end of this paper is reached.

¹ Verbs like "to typewrite" are of course only apparent exceptions; they are only secondarily verbal in character, being denominative derivatives from already existing compound nouns. Similarly, in Greek, *σαρκοφαγέω* "I eat flesh" is not a derivative of a non-existing verb *φαγέω*, but a denominative verb derived from the substantive compound *σαρκοφάγος* "flesh-eating"; so also Latin *aedificō* "I build" is not directly compounded of *aedi-* "house" and non-existing *facō*, but is either derived from a noun stem *aedifec-* "house-builder" or formed on the analogy of verbs like *pontificō* that are themselves derived from noun stems (e. g. *pontifec-*). On the other hand, while nouns like "man-eater" can not be considered as conclusive evidence of noun incorporation, serious exception must be taken to Dr Kroeber's statement that it may not illustrate noun incorporation "because 'eater' is functionally a noun" (Kroeber, loc. cit., p. 570). This may or may not be true, according to the genius of the particular linguistic stock discussed. "Man-eater" is not necessarily compounded, as in English, of "man" and "eater," but may be a noun of agency directly formed from a compound verb "man-eat." *Man + "eater" is not morphologically equal to "man-eat" + -er.

It is this process of compounding a noun stem with a verb that it is here proposed to call noun incorporation, no matter what the syntactic function of the noun logically is. The type of verb, "to song-write," that Dr Kroeber alone regards as illustrative of noun incorporation, is best considered a particular class of the more general type of noun-verb compound verb. As a matter of fact, it is often just as difficult, at least in some American languages, to draw the line between the objective and non-objective use of an incorporated noun as it is to determine the precise syntactic value of the qualifying member of a compound noun. Thus "I hit his face" may often be interpreted locatively as "I hit him in the face," while even so transparent an example as "I eat meat" may at times be understood instrumentally as "I feed on or with meat." It is not claimed that in all American linguistic stocks that are concerned in this problem of noun incorporation the syntactic value of the incorporated noun is variable, but the fact that it is variable in several languages (Takelma, Yana, Shoshonean) that illustrate objective noun incorporation justifies the setting up of as broad a definition as possible for the process. This definition is of a purely morphologic, not syntactic, character. The main point of psychologic interest here involved is that logical relations that are in many, probably most, languages expressed by syntactic means are in several American languages expressed, to at least some extent, by morphologic, or, if preferred, compositional processes. "I song-write" is such a replacement of the syntactic "I write songs," but the replacement is logically and psychologically parallel to that of "as white as snow" by "snow-white." In both cases the grammatical expression of a logical relation, in other words a syntactic process, is sacrificed to a compositional process in which the logical relation is only implied. The sacrifice of syntax to morphology or word-building is indeed a general tendency in more than one American language.

The broader or more inclusive a concept, the more urgently it requires classification to make it practically usable. It is clear that in the concept "noun incorporation" as defined above several fairly distinct processes and usages have been combined, and it

will be found that in the actual details of the use of noun incorporation those American languages that come under the general category "noun incorporating" often differ materially among themselves, each traveling more or less its own way. It is of little use to classify noun incorporation into various types on purely logical grounds; all *a priori* schemes of linguistic processes based on logical considerations are apt to be found encumbered with artificialities when tested by application to particular languages. Only such varieties of noun incorporation will be here suggested as a certain amount of familiarity with some American languages has shown to actually occur. The *instrumental*, *locative*, and *objective* types of noun incorporation have been already referred to. Corresponding to the objective use of incorporated nouns in transitive verbs we should expect to find a *subjective* use of such nouns in intransitive verbs; this process, despite Dr Kroeber's scepticism,¹ can be illustrated in Iroquois and Pawnee. Examples occur in which the incorporated noun does not directly function as the subject of the verb but stands logically in a predicative relation to the subject or object. That is, such sentences as "he travels as spy" and "I call him an enemy" may be converted into the noun-incorporating verbs "he spy-travels" or "spy-travels" (not equivalent in this case to "the spy travels") and "I-enemy-call-him" or "I-enemy-call" (not equivalent to "I call the enemy"). Such uses of an incorporated noun may be termed *predicate subjective* and *predicate objective*. A further type of verb with incorporated noun is logically parallel to the so-called *bahuvrihi*² type of compound noun. In such verbs (generally adjectival in meaning) the incorporated noun is not the logical subject of the verb but is possessed by another, sometimes grammatically unexpressed, noun. Just as "red-head" means not "a red-head" but "one who has a red-head," so a bahuvrihi verb with incorporated subject like "head-is-red" would mean not "the head is red" but "he has a red head." Such verbs sometimes look super-

¹ Kroeber, loc. cit., p. 573.

² A Sanskrit word borrowed from native Hindu grammatical terminology. The word means "much-rice," that is, "having much rice," and is itself an example of the class of compound nouns for which it serves as label.

ficially like noun compounds with a verb or adjective as the qualifying member; this deceptive resemblance is also often shared by intransitive, particularly adjectival, verbs with incorporated noun subject.

Of fundamental importance is the distinction between verbs denoting permanent or general activity and those predicating a single act. Thus "I meat-eat" may be understood to mean either "I eat meat, I am a meat-eater" or "I eat the meat (at one point of time)"; in its former sense it may be termed a verb of *general* application, in its latter sense one of *particular* application. The various syntactic types of verbs with incorporated noun enumerated above may be used in either a general or particular sense. Thus the verb "I concert sing" with locative incorporated noun may either mean "I sing at concerts, my business is that of singing at concerts," or "I am singing at the concert." Bahuvrihi verbs, however, hardly occur except as verbs of general application. This distinction between a general and particular type of verb is of significance in so far as in some American languages verbs with incorporated noun always belong or tend to belong to the former type, single activities being expressed by the syntactic method that we are familiar with in Indo-Germanic or by one more nearly resembling it. On the whole, "general" verbs with incorporated object are more often met with, or, at any rate, met with in more languages, than those of the "particular" class, and this fact is in striking and significant analogy with the prevailingly "general" character of compound nouns.

A third and obvious method of classifying verbs with incorporated noun is to set off those languages that, like Iroquois, Pawnee, Shoshonean, and Takelma, prefix the incorporated noun to the verb stem from those that, like Yana and Tsimshian, suffix it. This distinction, as such, is not one of fundamental importance, being bound up to some extent with the more general one of the prevailingly suffixing or prefixing character of the particular language. It is significant, however, for languages that make use of both prefixes and suffixes, to note with what group of affixes the incorporated noun is affiliated, for infer-

ences may sometimes be drawn in this way as to the essential nature of the incorporative process. When in Paiute, for instance, the incorporated noun is prefixed to the verb stem, and it is further noted that practically all relational elements, including the pronominal affixes, are suffixed, while adverbial stems and instrumental elements are prefixed, it becomes fairly evident that the incorporated noun is, from its morphologic treatment, not so much of syntactic as of compositional value; "to rabbit-kill" is not morphologically comparable to "to kill-him," but rather to "to quickly-kill."

Let us now turn to a brief review of the facts in regard to noun incorporation in a number of American languages that can be shown to make use, in greater or less degree, of the process. To illustrate noun incorporation, Nahuatl has been often cited. The noun object of a transitive verb may in Nahuatl be either incorporated into the verb-complex by being inserted between the verb stem and the prefixed pronominal subject, in which case it loses its nominal suffix (-*tl*, -*tli*, -*in*), or it may be expressed independently of the verb, its syntactic value being given by an objective pronominal element that immediately precedes the verb stem; this latter process is plentifully illustrated elsewhere in America and has often been termed objective pronominal incorporation. Thus, in Nahuatl, one may either say *nī-c-qua in nacatl* "I-it-eat the flesh" or *nī-nīca-qua* "I-flesh-eat." According to Dr W. Lehmann,¹ however, there is an important difference in meaning between these sentences. The former means "I eat the flesh" (a particular act), the latter "I eat flesh, I am a flesh-eater." In other words, noun-incorporation of the object seems to occur in Nahuatl, at any rate according to Lehmann, only in verbs of what was above termed the general type. The incorporated noun of Nahuatl does not always appear, however, with the syntactic value of an object, and this point, though not often urged, is naturally of primary importance. In the sentence *nī-k-tle-watsa in nakatl*² "I-it-fire-roast the

¹ W. Lehmann, "Ergebnisse und Aufgaben der mexikanistischen Forschung," *Archiv für Anthropologie*, vi, 1907, pp. 113-168. See English translation by Seymour de Ricci, *Methods and Results in Mexican Research*, 1909, pp. 65, 66. Dr Kroeber is not literally correct when he implies (Kroeber, loc. cit., p. 574) that no explanation has ever been given of the difference in treatment of the Nahuatl noun object.

² This and the following examples are taken from F. Misteli, *Charakteristik der hauptsächlichsten Typen des Sprachbaues*, pp. 120, 115. Misteli's more phonetic un-Spanish orthography is here preserved.

meat" the incorporated noun *tle-* (absolute *tletl*) "fire" is instrumental in value; in *ō-ki-keš-kotōn-kè in itštekki* "(they) had-him-neck-cut the robber" (*ō . . . kè* denotes plural perfect) the incorporated noun *keš-* (absolute *keštli*) "neck" is equivalent to a locative; in *šōtši-kwepōni in no-kwik* "flower-blossoms the my-song, my song blossoms like a flower" the incorporated noun *šōtši* (absolute *šōtšitl*) is predicative to the subject, this sentence illustrating the predicate subjective type of noun incorporation already spoken of. These last three examples, it may be incidentally observed, seem rather particular than general in their application. For the existence, then, of noun incorporation in Nahuatl there seems good evidence, assuming, of course, that examples of the types cited are in genuine use. It is clear, furthermore, that noun incorporation of the object is in Nahuatl only a special syntactic use of a more general process of noun incorporation, and that this process is more or less analogous to noun composition (in noun compounds the first member loses the suffix found in the absolute form).

[Dr Kroeber states that "serious doubt is cast on all noun-incorporation in Nahuatl by the indication of complete lack of incorporation in all related languages. The Shoshonean dialects are but little known, yet enough to make it certain that incorporation of the noun is at least not a typical process and probably does not occur in them at all."¹ But noun incorporation does undoubtedly occur in at least some Shoshonean dialects, as a recent study of Ute and southern Paiute has convinced the writer.² Before giving examples of Shoshonean noun incorporation, it will be well to point

¹ Kroeber, loc. cit., pp. 574, 575. The genetic relationship of Shoshonean and Nahuatl is not so definitely established or, in any event, not so close as to justify one in drawing inferences as to Nahuatl noun incorporation from corresponding facts in Shoshonean, the more so as "the Shoshonean dialects are but little known."

² A month's work was done by the writer in the latter part of the summer of 1909 among the Northern Ute of Utah. During four months of the winter and spring of 1910 a considerable body of Kaibab Paiute material, including a set of texts, was obtained from a Paiute student of the Indian school at Carlisle, Pa. Kaibab Paiute is spoken in S. W. Utah and N. W. Arizona; it differs more phonetically than grammatically from Ute, both southern Paiute (as distinguished from northern Paiute or Paviotso) and Ute belonging to Dr Kroeber's "Ute-Chemehuevi" group. Both sets of material were obtained for the Museum of the University of Pennsylvania.

out in how little relation noun incorporation here stands to the treatment of the pronominal elements. It was stated before that incorporated nouns are, in Paiute, prefixed, pronominal elements suffixed to the verb stem. But this is not the whole story. Properly speaking, pronominal elements are not affixed at all to the verb stem, but are merely added on enclitically. So many apparently clear examples of pronominal incorporation can be adduced in Paiute, that at first blush this statement will appear paradoxical, yet it is not difficult to demonstrate. In a verb form like *ton-ávān-iāṇan*¹¹ "I shall strike him" (verb stem *ton-a-*; future suffix *-vān-ia-*; 3d animate visible singular *-aṇa-*; 1st singular *-ni*) *-aṇa-* "him" and *-ni* "I" seem thoroughly welded into the verb-complex, the more so as the final *a* of *-vān-ia-* contracts with the initial *a* of *-aṇa-* into a long *ā*. Yet if we begin the sentence with the word *qan'ívaṇ*¹² "house-in" we can say *qan'ívaṇwianan*ⁱ *ton-ávān-i*² "house-in-him-I strike-shall, I shall strike him in the house." This usage can hardly be explained otherwise than by regarding the unindependent pronouns as enclitic elements which may attach themselves to any word in the sentence, very frequently, of course, the verb. It is clear, then, that if genuine examples of noun incorporation can be given in Paiute, it follows that nominal and pronominal incorporation do not necessitate each other.

A number of examples of noun incorporation have been selected from the Paiute manuscript material at the writer's disposal; it should be borne in mind that all the forms about to be given actually occur in texts. Examples of noun incorporation of the object are first given:—

¹¹ ' denotes aspiration; * length of preceding consonant; ° glottal stop; superior vowels and w, y, n are whispered, but are grammatically equivalent to fully voiced vowels and w, y, n, being reduced forms of these; o is open; ū, ô, ī, are long open vowels; long vowels followed by superior of same vowel represent long vowels with parasitic rearticulation of vowel; ʔ after k denotes palatalization of preceding back consonant; x is weak x developed from * before moderately velar q; ʔ is palatalized aspiration, weak German ch in ich; γ is voiced velar spirant (North German g in Tage); v is bilabial, yet apt to be dento-labial, particularly before i; v" is bilabial with inner sounding, acoustically midway between bilabial v and w; v and ʀ are voiceless v and r (weakly trilled tongue-tip r); p, t, and q are stopped consonants with simultaneous closure of glottis. ī, ū, and ʌ have been already explained (p. 253, notes 1, 2); ɪ is a palatalized form of ī, heard as obscure i.

² Final *a* of *-vān-ia* has to be elided.

qām'úyaa inUmpUγa' "(he) used to hunt jack-rabbits" (*qām'U-* "jack-rabbit"; *yaa i-* "to hunt"; *-nUm-* usitative; *-pUγai* remote past). *cú'q'uc'u qām'úv^{az}qaq'a'* "having killed one jack-rabbit" (*cú'q'uc'u* objective form of *cú'yuc'u* "one"; *p'^{az}qa-* "to kill one person or animal," *p* between vowels becomes *v* and *-uv-* generally becomes *-uv^w-*; *v^w* becomes voiceless *v^w* before *az*; *-q'ai* subordinating suffix indicating identity of subject of main and subordinate clauses). *qām'úxw^ooin'āη^a* "jack-rabbits that he had killed" (*qo^ooi-* "to kill several persons or animals," *q* between vowels becomes *γ* or *x* and *-Ux-* generally becomes *-Uxw-*; *-n'a-* verbal-noun suffix; *-aηa* "his").¹

^{ux}qwán'ô^oxw^aai^tuip'Uγaiyaη^a "(he) caused her to go for wood" (*^{ux}qwa-* "wood," absolute *^{ux}qwá^pi*; *nô^o-* "to carry on one's back"; *-xw^aai-* derivative suffix "to go to do"; *-i^tui-* causative suffix; *-aηa* "her").

^{ux}qwáiyá^avaiyix'u "while bringing back wood" (*yā^avaiyI-* compound verb consisting of *yā^a-* "to fetch" and *paiyI-* "to return"; *-x'u* final form of *-γu-*, subordinating suffix indicating that subjects of main and subordinate clauses are not identical).

naηqávan^{wi}pantuxwix^uumⁱ "while you shake your ears" (*naηqava-* "ear," absolute *naηqávⁱ*; *^{wi}pantuxwi-* "to shake," *w* becomes *ηw* between vowels; *-x^yu-* is palatalized form of *-xu-*, *-γu-*, subordinating suffix; *-^o. . . mi* "you").

wan'áηwantixwáip'Uγa' "he went to set his rabbit-net" (*wan'a-* "rabbit-net"; *watci-* "to put, set").

wi^ti^tp'^ucaγai^yu "while looking for a knife" (*wi^ti-* "knife," absolute *wi^ti^tsi-*; *p'^ucaγai-* "to look for"; *-yu* subordinating suffix used instead of *-γu-* after *-γai-*).

t'^asi^puv^ucaγaik^{ya} "do ye look for flint!" (*t'^asi^pU-* "flint"; *-k^ya* is palatalized form of *-q'a* denoting plurality of subject).

qātsin^onoróp'Uγa' "(he) poked for rats with a stick" (*qā-* "rat," absolute *qātsi-*; *tsin^onoro-* "to poke with a stick").

It is interesting to note that certain noun stems seem to lose the final vowel when incorporated with certain verbs, sometimes even the final consonant and vowel. Thus *naηwa-* "track" (absolute *naηwávⁱ*) appears sometimes as *nam-*, *nan-*, *naη-* (according to place of articulation of following stopped consonant), also as *na-* and,

¹ This form is nominal and means literally "his jack-rabbits-killing" or "his jack-rabbits-killed ones." It implies a verb *qām'úxw^ooi-*, however.

with entire loss of voice, ^{na}-. Similarly, *nīḡwū*- "person" appears as *nīm*-, *nīn*-, *nīḡ*-,¹ *nī*-, and ⁿⁱ-. An example or two may be given:—

namḡú'aḡaⁱkuḡ'ūḡa' "(he) started to look for a track" (*nam*- "track"; *-ku*- inceptive).

nīcīl'caḡw^aai^xa' "while teasing a person" (*nī*- "person"; *cīl'caḡw^aai*- "to tease"; *-x^aai* is palatalized from *-xai*-, *-ḡai*, subordinating suffix).

While one or two of these examples of verbs with incorporated noun object seem capable of being interpreted as general in application, most of them evidently refer to particular acts. Inasmuch as Paiute can express, and generally does express, the object of the verb by providing the unincorporated noun with the accusative ending *-a* or *-ya*, the problem presents itself of when noun incorporation and when the syntactic method is used to express the object. This cannot be satisfactorily answered at the present time; it can only be suggested that what may be called typical or characteristic activities, that is, those in which activity and object are found regularly conjoined in experience (*e. g.* rabbit-killing, looking for a trail, setting a net), tend to be expressed by verbs with incorporated objects, whereas "accidental" or indifferent activities (*e. g.* seeing a house, finding a stone) are rendered by verbs with independent, syntactically determined nouns. It must be admitted, however, that a hard and fast line between "characteristic" and "accidental" activities would be difficult to draw.

Other types of noun incorporation than the objective occur in Paiute. A few examples will suffice:—

wīl'on'op'ūḡa' "(he) stabbed with a knife."

q^{'wa}'sīx^{wi}'paḡ'ūḡaiyaq^{'a}; "with (his) tail (he) hit it" (*q^{'wa}'si*- "tail," absolute *q^{'wa}'sīVⁱ*; *k^{'wi}'pa*- "to hit"; *-aq'a* "it" visible).

axórov^{wi}ik^{'y}axu^gq^{'wa}m^{'u} "while they were licking it" (*axo*- "tongue," absolute *axómp^{'i}*; *to^wi*- verb stem not separately found: *-k^{'y}a* = *-ḡ'a*- plural subject; *-xu*- subordinating suffix; *-g[']q^{'wa}*- "it" invisible; *-m^{'u}* "they" invisible).

qwiil'īḡwAp'ūḡaiyaḡ^a "he smoked him, locked him up in smoke" (*qwiil*-, cf. *qwiil-k^{'y}a-Rⁱ* "smoke"; *īḡwa*- "to lock up"; *-aḡa* "him").

nīḡwūm'aḡ^gwūḡ'ūḡaiyam^gum^{'u} "they caused them to be persons

¹ *w* does not really disappear in these words, as *ḡw* goes back to original *m*.

again" (*nĩḡwU*- "person"; *maḡ^ḡwU*-¹ "to render, cause to be"; *-amU*- "them" visible; -^ḡ . . . *mU* dual animate subject).

The first three of these examples show a clear use of the incorporated noun as instrument, in the fourth we are perhaps dealing with a locative use, while the last verb illustrates the predicate objective type of noun incorporation.

Compound verbs, that is, verbs compounded of two or even three verb stems, are common in Paiute. Ordinarily the actions expressed by these compounded verb stems are coördinated in thought, thus "to sing-stand" is logically equivalent to "sing and stand"; yet there is a number of verb stems that treat a prefixed verb stem as the syntactic equivalent of an object. As the latter type of compound verb seems to have some bearing on the problem of objective noun incorporation, a few examples are given:—

paḡáin^ḡnĩt'iv^wit'cu^ḡAḡ'Uḡa' "(he) learned how to walk" (*paḡáin^ḡni* = "to be walking," composed of verb stem *paḡai-* and continuative suffix *-n^ḡni-*; *t'iv^wit'cu^ḡa-* "to learn how").

yaáit'iyāḡḡiḡ'āḡ^{wa} "do ye make him hunt (game)!" (*yaai-* "to hunt"; *iyā-* "to bring about"; *-ḡḡi-* indirective; *-ḡ'a-* plural subject; -^ḡ . . . *ḡwa* "him" invisible).

tixwí'n'at'iv^wit'c^uḡUḡat'ḡ^{wa} "(he) asked him to tell a story" (*tixwí-n'a-* "to tell a story"; *t'iv^wit'cu-* "to ask for, request"; -^ḡ*ḡwa* "him" invisible).

niv^wáR^aton^ḡnĩⁱt'ḡwawā'pUḡa' "(he) made a noise of shaking off snow from (his) feet" (*niv^wa-* "snow," absolute *niv^wávⁱ*; *t'^aton^ḡnĩ-* "to shake off from one's feet"; *t'ḡwawā-* "to make a noise").

As far as syntax is concerned, these compound verbs are comparable to verbs with incorporated noun objects. It seems fairly evident that there is a general tendency in Paiute to modify the meaning or limit the range of a verb by compounding it with a prefixed stem; this second stem may be nominal or verbal, or, it may be added, adjectival (thus *a^ḡát'ĩnt'ⁱḡa-* "to eat well, eat good things" from *a^ḡat'-i-* "good" regularly followed by nasal consonant, and *t'ⁱḡa-* "to eat"). Hence noun incorporation is but a particular case of verb composition, using that term in its widest sense, and objective noun incorporation but a particular syntactic use of a larger process. It is important to notice that incorporated

¹ Not a causative suffix, but a verb stem.

noun stems, whether of body parts or not, are not affiliated with the group of non-radical instrumental prefixes already spoken of. In the examples of noun incorporation given above several of these instrumental elements occur (*pu-*, *p^u-* "with the eyes"; *tsi-* "with the point of a stick"; *t^a-* "with the feet"); in every case it will be observed that the incorporated noun object (e. g. "knife," "rat," "snow") precedes the verb stem with its instrumental prefix. The instrumental use of the incorporated noun (e. g. "tail") should not mislead us into confusing two distinct classes of prefixed elements; the resemblance in such a case is merely syntactic, not morphologic.

Finally, there exists in Paiute a number of intransitive verbs with incorporated noun subject; such verbs seem to have reference particularly to natural phenomena and states. Examples are:—

niv^wágarĩⁱyĩ "snow-sits, the mountain peak is covered with snow"
(*niv^wa-* "snow"; *garĩ-* "to sit"; *-yĩ* present tense.

niv^wāviⁱyĩ "snow-lies, there is a field of snow on the mountain slope"
(*āvi-* "to lie").

págarĩⁱyĩ "water-sits, there is a lake" (*pā-* "water").

pāγĩn'ax'qak^ĩpUγa' "fog appeared," lit. "fog began to sit" (*pāγĩn'a-* "fog, cloud," absolute *pāγĩn'avⁱ*; *-x'qak^ĩ-* = *q^{az}garĩ-* "to begin to sit," reduplicated with inceptive meaning from *garĩ-* "to sit").

From such verbs as these are derived present participles in *-Rⁱ* or *-ntⁱ* (after *i*-vowels *-Rⁱ* becomes *-tcⁱ* or *-ntcⁱ*) that are employed as nouns. Examples are *páγárĩkⁱ* "water-sitting, lake"; *pān^{az}q^wintⁱ* "water-running, stream"; *qáivaγárĩkⁱ* "mountain-sitting, peak"; *qáivāvitcⁱ* "mountain-lying, plateau."¹ So perfectly clear is the essentially verbal force of such nouns, that in the plural the verb stem must change to the plural stem of corresponding meaning. Thus the plural verb corresponding to *garĩ-* is *yuxwi-*, and *páγárĩkⁱ* "lake" becomes *páiyuxwitcⁱ* "waters-sitting." That we are here really dealing with verbs with incorporated subjects and not with noun compounds in which the qualifying verb or adjective follows the noun stem, is further shown by such forms as *pⁱy^káxwit^u*

¹ Thus is disposed of a class of apparent noun compounds in which what seems to be the qualifying member follows instead of preceding, as it normally should. See Kroeber, "Noun Composition in American Languages," *Anthropos*, vol. v, 1910, p. 213. There is in Ute and Paiute no special class of nouns in *pā-*, as he suggests.

(*p^{'i}y^uk^ua*- "sore, to be sore"; *q^uit[']u*- "anus," absolute *k^{'u}i[']túmp^{'i}*), a *bahuvrīhi* noun meaning "one who has a sore anus" (proper name), and *p^{'i}y^uk^uáoā[']γai[']p[']u[']γa[']* "(he) had a sore back" (*oā*- "back," absolute *oā[']v^{'i}*; -*γai*- derivative suffix "to have"), a derivative of the noun "sore back." In these true noun compounds the qualifying adjective or verb precedes.

On comparing Nahuatl noun incorporation with that of Shoshonean, as represented by Paiute, we find a number of striking resemblances. In both Nahuatl and Paiute the incorporated noun is prefixed to the verb stem; in both it often loses a suffix found in the absolute form of the noun; in both the incorporated noun is used not only objectively, but also instrumentally, locatively, and as predicate of subject or object; noun incorporation is in both languages but a particular form of modifying the primary meaning of the verb by prefixing another stem to that of the verb;¹ and in both languages the objective relation is more often expressed by syntactic means than by noun incorporation, the latter method being employed, it would seem, in expressing "general" or "characteristic" acts as contrasted with "particular" or "accidental" acts. In both Nahuatl and Paiute, moreover, the process of noun incorporation is best considered one essentially of composition of independent stems, and this point of view is further justified by the fact that in both languages compound nouns can be formed with the greatest ease and are actually found in great number. Whether these resemblances are due to the often urged genetic relationship of Nahuatl and Shoshonean and are thus common Uto-Aztekan property, it is as yet too early to say. At any rate, it is fair to say that the evidence here presented does not militate against the Uto-Aztekan hypothesis but, on the contrary, tends to support it.

Yana has been put by Drs Kroeber and Dixon² in a morphological class by itself as contrasted with the "central Californian" type. We need not then be surprised to find that it makes use of the "un-Californian" process of noun incorporation. The incorporated noun of Yana is, like all affixes, suffixed to the verb stem; certain

¹ For examples of Nahuatl verbs compounded with prefixed adjective and verb stems see Misteli, op. cit., p. 115.

² See maps in their article on "The Native Languages of California," *American Anthropologist*, N. S., v, pp. 1-26.

derivative suffixes, for instance *-wilmi*-¹ "on one side" and indirective *-ma*-, may precede an incorporated noun, others, such as *-gu*- "a little" and causative *-ʔa*-, regularly follow it. Following the derivative suffixes of the second class are the temporal and modal suffixes, these, in turn, being followed by the personal endings. The incorporated noun is thus very firmly knit into the verb-complex, never standing at its absolute beginning or end. All nouns in Yana end in their absolute form either in a radical short vowel or, if the stem is monosyllabic or the stem final is a long vowel, diphthong, or consonant, in a suffixed *-na*. When incorporated, the noun loses this *-na* and, if the stem ends in a short vowel other than *-i*, adds an *-i*; noun stems beginning with *b* and *d* sometimes change these consonants to *w* and *r*. The incorporated form *-wai*- of the noun *bána* "deer" (stem *ba*-) illustrates several of these rules.

An incorporated noun is often objective in meaning, while its use with locative, predicate subjective, or bahuvrihi force is also quite common. As the incorporated noun is treated in exactly the same way, as regards both position and phonetic change, no matter what its syntactic value may be, it is obvious how highly artificial it would be, from the Yana point of view, to treat objective noun incorporation as an isolated process. Some examples of Yana noun incorporation follow, and first such as illustrate the objective type:—

k!utxáisindja "I am thirsty" (*k!ut*-² "to want, desire"; *-xai*-, incorporated form of *xána*, *hána* "water"; *-si*- present tense; *-ndja* "I").

k!unmiyáusindja "I am hungry" (*-miyau*-, reduced form of *mó'yauna* "eating, food").

k!uʔáusindja "I want fire" (*ʔ* is inorganic; *au*-, incorporated form of *áuna* "fire").

k!úruwawisindja "I wish to have a home" (*k!uru*- developed from *k!ut*- before *w*; *wáwi* "house").

k!uruwáisindja "I want deer meat" (*-wai*-, incorporated form of *bána* "deer, deer meat").

¹ For phonetic key to Yana see E. Sapir, "Yana Texts," *University of California Publications in American Archaeology and Ethnology*, vol. 9, pp. 4, 5.

² N. Yana dialect. C. Yana has more archaic *k!un*-; this form of stem is preserved in N. Yana before nasal consonants.

mits!áugumman^ét' (23, 1)¹ "they had fire indeed" (*mits!*-, *mits!*- "to have"; -*gumma*- "truly, indeed"; -*n^ét'*, reduced from *-^éni-t'i*- remote past and quotative).

mits!áuha^énigi (164, 4) "let us have fire!" (-*ha*- hortatory; ^é is inorganic; -*nigi* "we").

mits!áuwilmisindja "I hold fire in one hand" (-*wilmi*- "on one side").

mits!waw^é (181, 9) "have house, settle down!" (-*waw^é*- "house"; ^é imperative).

mits!amáits!its!gisinu (181, 9) "you will have children" (*amáits!i*- "child" not used without -*ts!gi*- diminutive plural suffix; -*si*- present or future in second person; -*nu* "you").

mits!djuk!uts!i^éi (177, 1) "to have (one's) heart, have courage" (-*djuk!uts!i*-, absolute *djúk!uts!i* "heart"; *-^éi* infinitive).

'ái^éyausindja (28, 2) "I have carried fire" (*'ai*- "to carry"; *-^éy*- is inorganic).

auw^éáurusk'inigi "we have gone for fire" (*auwi*- "to take"; ^é is inorganic; -*ru*- "to go to do"; -*sk'i*- present in 1st person plural).

Some of these examples seem capable of being regarded as of the "particular" type, while others bear interpretation as verbs of "general" application. The normal method of expressing the objective relation is to have the object noun in its absolute form follow the verb, a syntactic particle *gi*, which is employed to indicate the non-subjective character of the following noun, standing between the two. Sometimes a noun object is not only incorporated but also repeated as syntactic object with preceding *gi*. Thus the form *'ái^éyausindja* quoted above is in the text followed by *gi^éáuna* "(obj.) fire." In parallel fashion we have *auw^éáusan^é-t'iw ai^éáu'* (167, 3) "the fire had been taken away" (-*sa*- "away"; -*w*-, elided from -*wa*- passive suffix;² *ai* "it"; *áu'* "fire," female form); literally translated this sentence would read "(it)-had-been-fire-taken-away it fire." It would seem that in Yana, as in Paiute, noun incorporation of the object is found chiefly in verbs of "characteristic" activity, a category in which verbs of desiring and possessing might very well be reckoned. That there is no sharp line of demarcation, however, between the incorporating

¹ References are to page and line of "Yana Texts."

² The incorporated subject of a passive is morphologically identical with the incorporated object of a transitive verb. This is true also in Nahuatl.

and syntactic methods of rendering the object is indicated by the sentence *mits!k!álp!asinig ai ʔáuna* (164, 6) "we shall have fire" (*-k!al-p!a-* "to keep"; *-si-* future in 1st person plural; *-nig* elided from *-nigi*), in which the verb and object do not coalesce into a single word; yet logically this sentence is quite analogous to the form *mits!áuhaʔnigi* "let us have fire!" already quoted. As incorporated noun objects occur with particular frequency with *k!ut-* "to desire," and *mits!-* "to have," it may be objected that these elements are not really verb stems but prefixes forming denominative verbs. In the first place, there are no prefixes in Yana. In the second place, *k!ut-* and *mits!-* occur without incorporated nouns; thus we have *k!utdjuʔa-* "to like, desire" and *mitc!k'iʔ* (120, 13) "to come to (him)," lit., "to have hither" (*-k'i* "hither"; *ʔ* infinitive).

Examples of the locative and predicate subjective use in Yana of incorporated nouns are:

buidjalilʔaiʔgadúisiwandja "he kicks my calf" (*bui-* "to kick"; *djalilʔaiʔgađu* "calf of leg"; *-wandja* "he me").

s'ê'mawalʔasindja "I give him to drink" (*s'ê-* causative form of *s'iz-* "to drink"; *-ma-* indirective suffix; *-wal-*, incorporated form of *bállá*¹ "mouth"; *-ʔa-* causative suffix).

djĩyádjás (131, 3) "it tastes like human flesh" (*djĩ-* "to taste"; *-yā-* incorporated form of *yána* "person"; *-dja-* "off, away," of uncertain application here; *-s* present tense, female form).

djĩwáʔ (131, 3) "to taste like deer meat."

úldja'dumaʔguisasi "it smells like dog meat" (*ul-* . . . *-sa-* "to smell"; *dja'dumaʔgu* "dog").

gak!úwvʔ (175, 9) "talk as medicine-man, call upon your protecting spirit!" (*ga-* "to talk, utter"; *k!úwv* "medicine-man"; *ʔ* imperative).

The first two of these examples illustrate the locative, the last four the predicate subjective use of the incorporated noun.

Well developed in Yana is the bahuvrīhi type of verb. Examples are:

ʔáik!udalsindja "I am sick-handed" (*ʔaik!u-* "to be sick"; *-dal-*, incorporated form of *dállá* "hand").

¹ *-ln-* assimilates to *-ll-*.

daʔwáíhandja "I had much deer meat, was much-deered" (*daʔtʰ-* "to be much"; *-ha-* past tense).

tʰinʔauguhandja "I had little fire, was little-fired" (*tʰinʔ-* "to be little"; *ʔ* is inorganic; *-gu-* "a little").

tc!upʔtc'úisi "it has a good seed, is good-seeded" (*tc!upʔ-* "to be good"; *-tc'ui-*, incorporated form of *tc'úna* "eye, seed").

ú'waisi "he has two deer, is two-deered" (*u'-* "to be two").

báiwilmidalsi "he is one-handed" (*bai-* "to be one"; *wilmi-* "on one side").

k'úwawisindja "I have no house, am no-housed" (*k'ū-* "to be not").

k'úwáisk'inigi "we have no deer meat, are no-meated."

These verbs can not possibly be considered as secondary derivatives of compound nouns, for in compound nouns the qualifying member must always be nominal in form. Hence, if the first element of a compound noun is to be verbal in force, the verb stem must first be converted into a participle by the suffix *-mau-*; thus "one person" is *báigumaunyāna* (24, 12) "one-just-being person." That "much," "not," and numerals are rendered in Yana by true verb stems is proved by such verb forms as *dáʔtʰsi* "there is much"; *djimáŋgunʔtʰ* (25, 9) "they were just five" (*djiman-* "to be five"); and *k'úk'inʔtʰ* (169, 5) "she did not come" (*-k'i-* "hither"). Bahuwrihi compound nouns are in Yana simply substantivized derivatives of bahuwrihi verbs, not direct combinations of a verb and noun stem. Thus *dja'dumálʔgu* "hang-ears, dog" (*dja'-* "to hang"; *-du-* "down"; *málʔgu* "ear") is a derivative of the verb *dja'dumálʔguisi* "his ears hang" as truly as is *p'ubilla* "swim-about, duck" (*p'u-* "to swim"; *-bil-* "about, hither and thither"; *-la*, assimilated from *-na*, noun ending) of *p'ubílsi* "he swims about."

Morphologically the incorporated noun of Yana is to be considered as on a par with the numerous derivative suffixes of the verb, as is shown, among other things, by the fact that it may be immersed, as it were, in these, some of the prefixes preceding, others following the incorporated noun. The noun, then, when incorporated, is adverbial in character as regards its relation to the verb stem, that is, in so far as the derivative suffix is looked upon as adverbial in force rather than itself verbal with secondary position.¹

¹ See abstract of Yana structure in *American Anthropologist*, N. S., XI, p. 110.

The morphologic parallelism of such verbs as *k'lutxáisindja* "I want water" and *k'útsasindja* "I want to go away" (-*sa*- "away") is obvious. In Uto-Aztekan, where composition of independent verb stems takes place freely, there was no difficulty in interpreting noun incorporation as a kind of composition; in Yana, however, where the verb is regularly followed only by elements that, however concrete in meaning, never occur independently, it seems more appropriate to regard noun incorporation as a form of derivation or, at best, as something between composition and derivation.

Of syntactically greater importance than in Yana, yet morphologically less clearly developed, is the noun incorporation of Takelma. As the writer has already discussed this problem in some detail in his forthcoming "Takelma Language of Southwestern Oregon,"¹ it is not necessary to go into the matter fully in this place. All incorporated nouns are in Takelma prefixed to the verb stem, in contrast to the pronominal elements which, whether subjective or objective, are invariably suffixed. Here again, then, we see that noun and pronominal incorporation are unrelated morphologic processes. There is a further difference between the two sets of elements. The pronominal suffixes are as thoroughly welded with the verb stem (or verb stem plus its derivative suffixes) as one can desire, fully as much so, for instance, as in Indo-Germanic; on the other hand, incorporated nouns, and prefixed elements generally, are only loosely attached to the verb stem. Incorporation of nouns is in Takelma something more than mere juxtaposition and yet something less than composition or derivation; it may be best described as proclisis of stems, the stem, however, often coinciding with the absolute form of the noun.

The body-part stems occupy a somewhat special place in Takelma. As they hardly ever occur absolutely without possessive suffixes that, as a rule, are preceded by one or more formal suffixes serving to connect these with the stem, the prefixing of the bare stems of body-part nouns to the verb stem gives such noun stems more decidedly the appearance of being incorporated than other

¹To be published as part of *Bulletin 40*, pt. 2, Bureau of American Ethnology ("Handbook of American Indian Languages," edited by Dr F. Boas). See §§ 34-36 of Takelma section.

nouns. Thus the incorporated form of the noun *sal-x-dèk'*¹ "my foot" (*-dèk'* "my") is *sal-*, that of *dan-à-t'k'* "my rock" (*-t'k'* "my") is *dan-*, a form coinciding with the absolute *dàn*. Moreover, a number of body-part stems have developed a general locative meaning in which all trace of the original concrete signification is lost: thus *dak'*- (cf. *dág-ax-dek'* "my head") means not only "head (obj.), with one's head, in one's head" but also "above, over." Nevertheless, there are several frequently used body-part prefixes, such as *ĩ-* "hand," that have no secondary local sense. One should beware of exaggerating the difference between body-part stems and other noun stems. It is true that certain body-part stems are more often incorporated and have a wider range of usage than other stems, but the fact that the relation of stem to absolute form with possessive suffix is identical in both classes of nouns and that, furthermore, noun stems not referring to parts of the body are at least quite clearly incorporated in an instrumental sense, makes it evident that the incorporative employment of body-part stems is more intense, as it were, than that of others, but not different in kind. Noun stems used with instrumental force always follow a locative prefix (not necessarily a noun stem), noun stems used as direct objects precede a locative prefix. Hence it is clear that the incorporation of any noun stem, if only it is used instrumentally and preceded by an unindependent element, is easily proved. If, however, the noun is used objectively, it is only in the case of body-part stems, as a rule, that incorporation can be demonstrated beyond cavil. Other noun stems in such a position can be considered as independent of the verb. It is important to note, however, that a noun stem employed objectively regularly precedes the verb and that there is no pronominal suffix for the object of the third person.² These two points, taken together with the analogy of body-part stems, make something of a case for loose objective incorporation of noun stems other than those having reference to body parts.

Examples of incorporated instrumental and objective nouns, both body-part and other, may now be given:

¹ For phonetic key of Takelma see E. Sapir, "Takelma Texts," *Anthropological Publications University of Pennsylvania Museum*, Vol. II, pp. 8-11.

² Except sometimes when the object is personal, in which case a suffix *-k'wa* may be employed. This suffix, significantly enough, allows no objective noun to precede the verb.

wa^ail'oxóxi (114, 4)¹ "he gathered them together" (*wa-* local prefix "together"; *-i-* "hand" incorporated with instrumental meaning, cf. *i-ñx-dèk'* "my hand"; *-l'oxox-* aorist stem "to gather"; *-i* instrumental suffix).

da^asgek!eiha (102, 3) "he kept listening" (*da^a-* "ear" incorporated with instrumental meaning, cf. *da^a-nx-dèk'* "my ear"; *-sgek!eiha*, continuative of *-sgek!iⁱ-* aorist stem "to listen").

xāp!iⁱnó^uk'wa (188, 20) "he was warning his back" (*xā-* "back" incorporated with objective meaning, cf. *xā-hām-t'k'* "my back"; *p!iⁱ* "fire" incorporated with instrumental meaning, cf. *p!iy-à-t'k'* "my fire"; *-nó^ug-* aorist stem "to warn"; *-k'wa* "one's own").

gwenwayasgut!úsgathi (144, 3) "with (his) knife he cut their necks" (*gwen-* "neck" incorporated with objective meaning, cf. *gwen-hau-x-dèk'* "my nape"; *waya* "knife" incorporated with instrumental meaning, cf. *wayà-t'k'* "my knife"; *sgut!usgat-*, distributive of *sgó^ud-* aorist stem "to cut"; *-hi* instrumental suffix).

wili-wa^ail!ánida^a (28, 13) "you will keep house" (*wili* "house" loosely incorporated as object; *wa-* "together"; *-i-* "with hand"; *-tlan-* verb stem "to hold"; *-i-* instrumental suffix; *-da^a* 2nd singular future subject).

wai-s'ügüs'axgwaⁿ "I am sleepy" (*wai-* "sleep, sleepiness" incorporated noun, not occurring otherwise, used as object, cf. verb stem *wai-* "to sleep"; *s'ügüs'ax-* reduplicated aorist stem "to be confused (?)"; *-gwa-* comitative suffix "having"; *-n* first person singular aorist subject transitive).

An incorporated noun is also, though rarely, found used subjectively or predicate subjectively in intransitive verbs. An example of each usage is here given:

ba^abe^ek!iyiⁱk'da^a "forenoon" (*ba^a-* local prefix "up"; *be^e* "sun" incorporated as subject; *k!iyiⁱk'* aorist stem "to go, proceed"; *-da^a* aorist subordinating suffix).

mot'wòk' (17, 13) "he visited his wife's parents, lit., he son-in-law arrived" (*mot'* "son-in-law," not ordinarily used as absolute noun; *wòk'* aorist verb form "he arrived").

Before leaving Takelma it may be noted that all the verb forms here given are particular in application. On the whole it seems that this language has a decided tendency towards noun incorporation,

¹ References are to page and line of "Takelma Texts."

but has not carried the process of coalescence far enough to give the incorporated noun that is not a body-part stem a characteristically incorporative appearance. Another way of putting it is to say that Takelma stands midway between two such typical extremes as Athabascan and Iroquois.

No more thorough-going instance of a noun-incorporating language can be required than Iroquois. It is significant of the frequency with which noun incorporation occurs in Iroquois that in an Oneida text of barely twenty lines published by Dr Boas at the end of his recent study of Iroquois¹ no less than nineteen examples of this process are found, five passive and reflexive verbs² being included in the number. As in this study Dr Boas has discussed and illustrated the main facts in regard to Iroquois noun incorporation, we can content ourselves here with merely reviewing some of these facts and selecting from his illustrative material.

Inanimate nouns are regularly incorporated into the verb-complex when used as subject or object, apparently also at times when predicate subjective (or objective) in force. The animate noun does not seem to be as often incorporated as the inanimate noun; the animate subject, according to Dr Boas, is in fact never incorporated.³ Three points are of importance as indicating to what a degree the incorporated noun coalesces with the verb stem into a firm unit. In the first place the incorporated noun stem, if in its absolute form provided with one of the noun-forming prefixes *ga-* or *o-*, loses this prefix; in the second place it is always placed between the preceding subjective or objective pronominal element and the following verb stem, the verb stem, however, being immediately preceded by one of the five vowels *a, e, i, ē, o*, according to the formal class of the verb; in the third place many incorporated nouns take a suffix (generally *-sla-* or *zla-*,⁴ *-gwa-*, or inserted ')

¹ F. Boas, "Notes on the Iroquois Language," *Putnam Anniversary Volume*, pp. 427-460.

² Passives and reflexives are formed in Iroquois by incorporating what might be called "empty" nouns, to borrow a convenient Chinese term. They are respectively *-d-* and *-dad-*, both *a*-stems. See Boas, loc. cit., p. 457, notes 6, II.

³ Incorporated *-dAⁿlō* "friend" (Boas, loc. cit., p. 458, note 46) is perhaps rather predicate subjective than truly subjective: "they were not good as friends, *i. e.*, they were not friendly," not "the friends were not good."

⁴ In Oneida. Equivalent to Mohawk *-sera-*.

originally, it would seem, of verbal abstractive force, before the characteristic vowel of the verb stem. The form of the pronominal element preceding the incorporated noun depends on the inherent vocalic class of the noun, there being five paradigms of pronominal prefixes corresponding to the five vowels enumerated.¹ This vocalic class of the incorporated noun is in no way connected with that of the following verb stem or with the prefix of the noun in its absolute form.

A few selected examples of Oneida noun incorporation are taken from Dr Boas' text; the analysis of the forms is taken chiefly from the notes to the text.

yot'a'izu^m (455, 4)² "the trail was finished" (*yo-* third person non-masculine singular objective³ of *a-* paradigm; *-t'a'-* = *-d-* + *-a'-*; *-d-* passive of *a-* class; *-a'-* incorporated form, without suffix, of absolute *o-a'a* "trail," object of verb stem; *-izu^m* consists of prefix *-i-* of uncertain meaning and perfect verb stem *-zu^m* "to finish" of *e-* class but lost *-e-*, Boas, loc. cit., p. 452).

yelAⁿnodádi (455, 6) "someone carried song along, sang as he went along" (*ye-* third person indefinite subjective of *e-* paradigm; *-laⁿn-* incorporated form, without suffix, of absolute *ga-laⁿná* "song" of *e-* class; *-o-dadi* consists of class vowel *-o-* and present verb stem *-dadi* "to carry along," regularly employed with incorporated object).

lundnagla'slezáksge^é (456, 5) "they searched for villages" *lun-* = *lu^m-* third person masculine plural subjective of *a-* paradigm; *-d-* passive;⁴ *-nagla'sl-* incorporated form of absolute *naglá'sla* "village," derivative in *-sla* of aorist verb stem *naglat-* "to live"; *-e-zaks* consists of class-vowel *-e-* and present verb stem *-zaks* "to search"; *-gwe^é* imperfect tense).

du^mwadesAⁿnáwi^é (456, 9) "there they name were given" (*du^m-* seems to represent a combination of three distinct prefixes: *de-* duality concept, relation of name to name bearer, practically equivalent

¹ For these paradigms see Boas, loc. cit., pp. 442, 3. Cf. J. A. Cuoq, *Études philologiques sur quelques langues sauvages de l'Amérique*, p. 99.

² References are to page and line of Boas, loc. cit. For phonetic key see Boas, loc. cit., pp. 427-430.

³ Subjects of verbs that are perfect in tense are objective in form. See Boas, loc. cit., p. 438.

⁴ It is difficult to see what office this "passive" serves here. Is it to be understood as incorporated with *nagla'-* "to live," *-d-nagla'sl(a)-* meaning "wherein it is lived"?

to indirect object, *-d-* demonstrative "there," and *wa-* aorist prefix;¹ *-wa-* third person non-masculine singular of *a-* paradigm; *-d-* passive: *-e-sAⁿn-* consists of class-vowel *-e-* and incorporated form of absolute *o-sAⁿná* "name"; *-ā-wi^z* consists of class-vowel *-a-* and aorist verb stem *-wi^z* "to give").

sasagoyádagō ne yekzā^z (456, 1) "he again body-took up the child, rescued the child" (*sa-*, *za-* contracted from *z-* "again" and *wa-* aorist prefix; *sago-* "he . . . somebody" combined form of third person masculine singular subject and third person indefinite object; *-yáda* incorporated form of absolute *o-yáda* "body"; *-gō*, *-gō* aorist verb stem "to pick up, gather" of *e-* class but lost *-e-*; *ne* article "the"; *yekzā^z* "child").

yonAⁿyōde (456, 6) "stone stood" (*yo-* third person non-masculine singular objective² of *e-* paradigm; *-nAⁿy-* incorporated form of absolute *o-nAⁿyā^z* "stone" of *e-* class; *-ō-de* consists of class-vowel *-o-* and verb stem *-de* "to stand").

ǰeyadōdAⁿ (455, 8) "again her body was, again she seemed" (*ǰe-* = *z-ye-*; *z-* "again"; *-ye-* third person indefinite subjective³ of *e-* paradigm; *-yad-* incorporated form of absolute *o-yáda* "body"; *-o-dAⁿ* consists of class-vowel *-o-* and present verb stem *-dAⁿ* "to be thus").

ni'onadlasōdAⁿ (456, 7) "their fate would be thus" (*ni-* adverbial prefix "thus"; *-ona-* third person masculine plural objective of *a-* paradigm, changed from *-lona-* because of preceding prefix; *-dlas-* = *dlasw-* before following *o-*, incorporated form of absolute *a-dlāswa* "fate" of *a-* class; *-o-dAⁿ* as in preceding verb form).

The first five of these forms illustrate noun incorporation of the object, the last three of the subject. Two of the former are passives, but the incorporated noun is doubtless to be considered as the object of the transitive verb stem, not the subject of the secondarily passive verb form; in these cases the non-masculine pronominal subject refers not to the nominal subject, from our English point of view, but to the incorporated passive stem *-d-* replacing a logical subject. This morphologic affiliation of passives with transitives rather than with intransitives is characteristic of more than one

¹ See Boas, loc. cit., p. 451, no. 6, second paragraph.

² Verbs expressing a state have as pronominal logical subjects objective forms. See Boas, loc. cit., p. 438.

³ Why subjective? Cf. preceding and following verb forms.

American linguistic stock; in Iroquois "the trail is finished" is not to be analyzed as "the-trail is-finished," but "it is trail-finish-éd."

At first sight such a form as *yelAⁿnodádi* with its pronominal subject (*ye-*) and nominal object (*-lAⁿn*) seems to indicate that the incorporated noun object is the equivalent of a pronominal objective prefix, or rather that the combined pronominal subjective (or objective) prefix and objectively incorporated noun are the morphologic, as well as syntactic, equivalent of the composite subject-object pronominal prefix; thus *ye-lAⁿn* = "somebody-song" might be directly compared with *gu^mye-* "somebody . . . it (non-masculine singular)." Here, then, we would at last have an instance in which noun incorporation is similar in spirit as well as in name to pronominal incorporation, and such a view would be further confirmed by the fact that both pronominal elements and incorporated nouns are prefixed to the verb stem and follow certain adverbial prefixes (such as *z-* "again," demonstrative *d-*, future *Aⁿ-*). Comparison with other verb forms, however, soon shows this view to be untenable. Were it correct, we should expect to find that intransitive verbs with incorporated noun subject would do without a pronominal subject (or object) prefix as being unnecessary, yet reference to a form like *yonAⁿyóde* "it stone-stood" shows that such finite verb forms are impossible. Moreover, in forms like *sasagoyádagō* "he again somebody body-gathered" we see that the incorporation of a noun object (e.g. *-yada-* "body") does not preclude the possibility of a pronominal subject-object prefix (e. g. *-sago-* "he . . . somebody"). It is clear that in no case is the incorporated noun the equivalent of a pronominal prefix. In other words, noun incorporation in Iroquois, as elsewhere in America, is not pronominal replacement, which might be considered a syntactic process, but a kind of derivational or compositional,¹ at any rate a purely non-syntactic or etymologic process, the morphologic equivalent of a logically syntactic one.

¹ The fact that two noun stems are never compounded in Iroquois and that all apparent compound nouns consisting of noun stem and verb (or adjective) stem are really derivatives of verbs with incorporated nouns, makes this type of "composition" a highly specialized one. If, as in Yana, incorporated nouns could be morphologically grouped with adverbial affixes, there need be no hesitation in calling the process "derivational." As it is, Iroquois noun incorporation is something more or less *sui generis*, difficult to assign to any recognized morphologic category.

The distinction between subjective and objective noun incorporation¹ is thus merely of logical or syntactic value; morphologically it has no significance. A more important one is illustrated in the examples given. In the first four and in the sixth examples the incorporated object or subject is logically unmodified by a possessive pronoun or genitive; the incorporation is of an unqualified noun. In the fifth and last examples, however, the incorporated object or subject is logically qualified by a possessive pronoun or genitive, or, to put it more accurately, if these sentences are translated into an Indo-Germanic language, the nominal object or subject, now freed from the verb, will be found to be thus qualified. The three sentences referred to ("he again took up *the child's* body," "again *her* body was," "*their* fate would be thus") illustrate what might be called "possessed" noun incorporation. The Iroquois rule covering such cases may be thus stated:—if a noun capable of incorporation is qualified by a possessive pronoun or genitive, the noun stem is incorporated into the verb (forms a quasi-compound with the verb), while its modifier is expressed as the pronominal subject² or object of the verb according to whether the noun when incorporated is the syntactical equivalent of a subject or object; if the modifier is a genitive, it follows the verb as in apposition to its pronominal representative in the verb. The three sentences just given in English form thus become in Iroquois: "again he-somebody-gathered the child," "again she-body-was," "thus they-fate-are." This construction has considerable resemblance to the bahuwrihi type of verb ("she was again so-bodied," "thus they are so-fated," *waga-dlasw-îyo* "I-fate-good am, I am good-fated"),³ differing from it in that it is not confined to neuter verbs and does not necessarily imply general or permanent activity. In a neuter verb with unpossessed incorporated noun like *yonAⁿyôde* "a stone stood" there is only one object (or person) referred to

¹ The Iroquois distinction of active and neuter verbs obtains in all verbs, whether with or without incorporated noun. Transitive and intransitive are terms of little meaning in Iroquois, unless we choose to call such verbs "transitive" as have combined subject and object pronominal prefixes; all other verb forms, even such as have incorporated noun objects, would then be "intransitive."

² Objective in form if the verb is neuter.

³ I. e. "I have good luck, my luck is good." See Boas, loc. cit., p. 459, note 52.

("stone"); in a neuter verb with possessed incorporated noun like *nī'onadlsód^A* "thus is their fate" two objects (or persons) are referred to ("they" and "fate"),¹ while in an active verb with unpossessed or possessed incorporated noun (object) there are respectively two and three objects (or persons) referred to.

Typically noun-incorporating is also Pawnee. The following examples are due to the courtesy of Dr Boas:

tatī'ikāhwīt² "I dig the ground" (*ta-* indicative prefix; *-t-* "I"; *-īt-kāhwīt* = *-ītkār-pīt*; *-ītkār-* incorporated form of absolute noun *ītkār^u* "dirt"; *-pīt* verb stem "to dig").

tāhīkst^{uēn} "I make an arrow" (*tah-* = *tatr-*; *tat-* as above; *-rīks* incorporated form of *līks* "arrow"; *-st-* = *-sr-*; *-ru* verb stem "to make"; *-ēn* temporal suffix).

tatkītuh^{un} "I make a mortar" (*tat-* as above; *-kītuh-* = *-kītutr-*; *kītut* "mortar"; *-ru* and *-n* as above).

tikarīhih^u "the stone is large" (*ti-* third person indicative; *-karih-* = *-karitr-*; *karīt* "stone"; *-rih^u* verb stem "to be large").

tirahurārih^u "the deer is large" (*ti-* as above; *-rahurā-* incorporated form of absolute noun *nahurāk^u* "deer," *-i* + *n-* becoming *-ir-*; *-rih^u* as above).

The first three examples show noun incorporation of the object, the last two of the subject. It is evident at first glance that Pawnee noun incorporation is very similar to that of Iroquois. In both linguistic stocks the incorporated noun stem is inserted between the preceding pronominal element and the following verb stem, the pronominal prefix being itself preceded, if necessary, by a tense-modal

¹ This implies that *yo-* "it" of *yonAⁿyō'de* refers to *-nAⁿy-* "stone." It seems decidedly possible, however, that the third person non-masculine objective pronominal prefix of neuter and passive verbs (*yo-* of first and sixth examples, *wa-* of fourth example) does not refer to the incorporated noun "subject" or passive *-d-*, but is impersonal in character, like our English "it" in "it rains," so that even in such verbs there are two distinct "objects" referred to. Should this interpretation of the non-masculine singular prefix of neuter verbs be correct, it follows that the distinction made above between unpossessed and possessed noun incorporation resolves itself into the difference between impersonal and personal for neuter verbs and intransitive and transitive for active verbs (using the terms "transitive" and "intransitive" in the specifically Iroquois sense defined above).

² [~] denotes long vowel with rising accent, as in Takelma; *î* = *i* in English *it*; *u* = whispered *u*; *k'* = palatal *k*; *n* = "nasal breath with decided closure of the posterior nares and presumably *t* [or perhaps *k*] position of the tongue" (letter from Dr Boas); *ε* = glottal catch.

element (with Pawnee *ta-* compare Iroquois aoristic *wa-* and future *Aⁿ-*). Because of the peculiar phonetic laws of Pawnee the coalescence of incorporated noun with pronoun and verb stem into a word unit is even carried further, if anything, than in Iroquois. In both Pawnee and Iroquois, it should be remarked, verbs with incorporated nouns are freely used to refer to particular activities.

It will probably be found that a fair number of other American linguistic stocks, that do not regularly use noun incorporation to express particular acts, nevertheless make use of the process in verbs of the general type, including *bahuvrīhi* verbs. Algonkin seems to be a case in point.

Cree *nandawawamiskwew* "he hunts beavers, is a beaver-hunter" (*amisk* "beaver"; *nandonawew* "he seeks him").

Ojibwa *pāginindži* "he has a swollen hand" (*o-nindž* "his hand"; *pāgiši* "it is swollen").¹

Another language making use of noun incorporation in this limited sense is Tsimshian. Examples² are:

g'êl'Érla "to be a harpooner of seals" (*g'êl-g-* "to harpoon"; *Érla* "seal").

sEyêlwáyīnu "I am a paddle-polisher" (*sE-* causative prefix "to make"; *yêl-g-* "smooth"; *wái* "paddle"; *-nu* "I" indicative).

Enough evidence has been presented to make it clear that noun incorporation, even if the term be limited in its application to incorporation of subject or object, is by no means rare in America. Lest it be thought, however, that noun incorporation is indeed the characteristic of American languages generally, it is well to point out that it is entirely absent in a large, perhaps the larger, number

¹ These examples are taken from C. C. Uhlenbeck, "Ontwerp van eene vergelijkende Vormleer van eenige Algonkintalen," *Verhandelingen der koninklijke Akademie van Wetenschappen te Amsterdam*, Afdeling Letter-kunde, N. R., XI, no. 3, p. 65. In his Fox grammar Dr Jones makes no explicit reference to noun incorporation as a regular process (Algonquian, *Handbook of American Indian Languages*, I, pp. 735-873). Perhaps incorporated nouns are in Algonkin best looked upon as secondary stems with substantival force, cf. Fox *-winä-* "horn" and *-kwā-* "woman" (pp. 796, 797).

² Due to the courtesy of Dr Boas. *ê* is *e* of English *met*; *E* is obscure vowel of undefined quality; *g'* is palatal *g*; *ê* is voiceless palatal *l*; *r* is uvular; ' represents weak glottal catch. The dialect is that of Tsimshian proper. See now Boas, Tsimshian, § 34 (*Handbook of American Indian Languages*, I, 365).

of them. Such are Athabascan, Salish,¹ Chinookan, Yokuts, Siouan, and Eskimo; and yet Athabascan and Eskimo might well be considered types of "polysynthetic" languages.

We have seen that noun incorporation as ordinarily understood, that is, objective noun incorporation, can not be treated without reference to other syntactic uses of the incorporated noun. Objective noun incorporation may be a justifiable theme to treat from a logical or psychological point of view, but as regards morphology there is every reason to consider this particular process a special case, syntactically speaking, of the more general process of coalescence of noun stem and verb stem into a single verb form. Besides objective and subjective incorporation of noun stems, examples have been given of their use predicate objectively and subjectively, instrumentally, locatively, and in what have been termed *bahuvrīhi* constructions. The manner of incorporation has been found to differ considerably in different linguistic stocks; this applies to position, degree of coalescence with verb stem, and morphological treatment of the incorporated noun. Despite all differences of detail one fact stands out prominently. In no case, not even in Iroquois, where the process is probably of greater syntactic importance than elsewhere, can the incorporated noun be considered as morphologically the equivalent of a pronominal affix. This does not mean that noun incorporation has no syntactic *value*. The characteristic fact about the process is that certain syntactic relations are expressed by what in varying degree may be called composition or derivation.²

GEOLOGICAL SURVEY OF CANADA,
OTTAWA, ONT.

¹ The "substantivals" of Salish and Kwakiutl, as already pointed out, are not instances of true noun incorporation.

² Since this article was written (June, 1910) Mr J. P. Harrington has published sketches of two Tanoan dialects, Tiwa and Tewa. In Tiwa both direct and indirect noun objects may be incorporated in the verb complex, coming between the pronominal prefix and verb stem; such incorporation is obligatory for singular direct objects (*American Anthropologist*, N. S., 12, 1910, p. 28). In Tewa singular direct objects may or may not be incorporated (*ibid.*, p. 501). Tanoan verbs with incorporated noun object are, as in Nahuatl and Shoshonean, noun-verb compounds.

ADDITIONAL NOTES ON IROQUOIS SILVERSMITHING

By ARTHUR C. PARKER

IN the *American Anthropologist*¹ for July-Sept., 1910, I endeavored to show that most of the silver brooch patterns used by the eastern Indians, particularly the Iroquois, had come from trans-atlantic sources, most probably directly from Scotland. I pointed out also that the Iroquois as late as 1865 commonly made silver brooches similar in most ways to Scotch Luckenbooth brooches, that they considered their product the result of a purely native art, and that this belief had been held by nearly all, if not all, collectors of Iroquois silver ornaments.

It may be well to state, in passing, that the Iroquois silver *ēniūs'kā'* as well as the Scotch Luckenbooth brooch was fretted out of a thin plate of silver and generally had a single tongue or pin loosely attached to one side of a central opening. The cloth was pulled through this opening sufficiently to allow the tongue to pierce it when it was drawn back and the brooch thus held securely. This form of brooch is distinctive and differs from the heavy forms with a clasp pin on the back, from the fibula, and from other forms of pin jewelry. The Luckenbooth brooch resembles a buckle more than it does a pin or fibula.

Since the publication of my former article I have come across other interesting references to silver brooches and am much indebted to Mr Alfred Ela of Boston for many citations, with particular reference to the origin of heart-shaped brooches in Europe. My article traced the European brooch from the burial mounds of East Yorkshire to Scotland. In the *Transactions of the Glasgow Archaeological Society*, vol. 6, part 1, 1910, I find, however, an article on heart brooches by Mr C. E. Whitelaw, F. S. A. Scot., in which the following statement is made: "The heart shaped brooch in various forms was in use in many countries in Western Europe, e. g. Scandanavia, Germany and England. In England it was one

¹ In an article entitled "The Origin of Iroquois Silversmithing."

of the commonest forms in mediaeval times and was probably introduced about the thirteenth century. I am unable to suggest when it came into use in Scotland." Thus, as had been anticipated, the brooch referred to has been traced to the continent. The

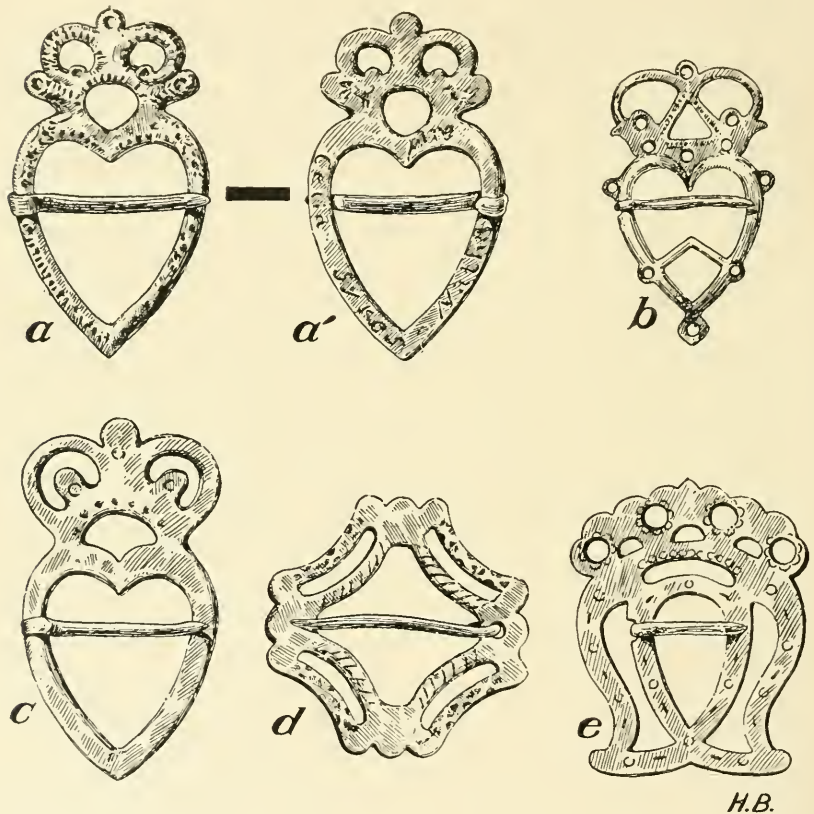


FIG. 45.—Scotch and Iroquois brooches. *a* is a Scotch brooch in the collection of the Wyoming Historical Society (Pa.). *a'* shows the reverse with an inscription. On the lower line are three forms of brooches made by the Iroquois and copied from Scotch patterns.

Scotch Luckenbooth brooches mentioned by Mr Whitelaw are described as usually of silver, often of inferior quality, and sometimes set with natural crystals or glass and occasionally with brass or

copper. Such brooches are described as having been cast in moulds and finished by hand. On these specimens the maker's initials or the place of manufacture are often found. The face is usually engraved and many times the reverse bears an inscription, a posy, the names of its owners, or the name of a donor and recipient. This last named form is generally found to be a marriage or a love token (see fig. 45). Any brooch pinned to the garment of a child was regarded by the Scotch as an efficient charm against witches, hence the name "witch brooches" was often applied.

When the Iroquois silversmiths copied the Scotch patterns they left off many things that were common in the original pattern and interpreted the design as their own education, environment, or customs dictated. The Iroquois many times fastened bits of glass to the brooches but never cast them. Their method was uniformly to fret them out of sheet silver or beaten coins, as previously described.

The most common forms of loose-tongued fret-work brooches in use in Great Britain as far as I have discovered from reviewing descriptions and illustrations, are the circle, the simple heart, the heart with the apex curved to one side, the simple heart crowned either by a coronet or thistle, the elaborated heart and highly conventional crown, and two hearts intertwined and crowned. Very probably the simple square was also used. All these forms and many others are found in Iroquois-made brooches of the eighteenth and early nineteenth centuries. The Iroquois brooches in their workmanship are distinctive. With them the thistle top was a bird's tail and in their brooches they lengthened the thistle and drew parallel lines to represent feathers. The Iroquois recognized the intertwined hearts to be such but called them "two jaws interlocked." Unlike the Scotch brooch of this type they did not place a tongue on each heart but fastened one across the central opening. Mr Harrington in his paper on silversmithing¹ remarks that the Iroquois use this brooch (see fig. 45, *e*) as a national badge and this is quite true. The Iroquois traveler, faithful to the precedents of his sires of the older days, generally fastens a double heart brooch to his coat or vest as an emblem of his nationality and as a

¹ *Anthropological Papers of the Am. Mus. of Nat. Hist.*, vol. I, part VI.
AM. ANTH., N. S., 13—19

hailing sign to the wanderers of his tribe. Never does he suspect that the motif of his emblem is anything but a genuine product of

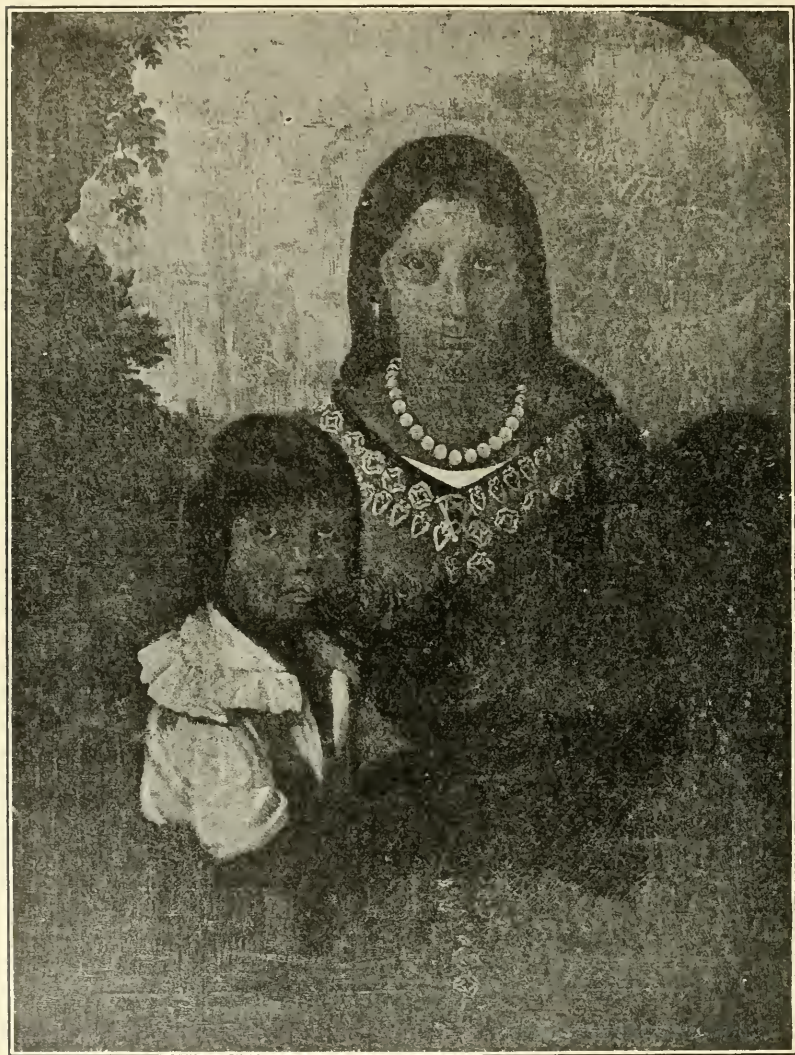


FIG. 46.—Pocahontas and her son Thomas Rolfe. From a painting in Heacham Hall, England, the home of the Rolfe family. (Reproduced by courtesy of Lathrop, Lee and Shephard.)

his own ancestors and thus a worthy token of his aboriginality. In it he never dreams of the canny Scot of earlier times.

Another type of brooch in common use by the Iroquois is the "council square," a quadrilateral pattern with concaved sides and notched corners, one square within another (fig. 45, *d*). This form I have not yet seen in works illustrating the silver ornaments of Great Britain but it appears in a painting of Pocahontas and her son Thomas Rolfe hung in Heacham Hall, England, which must have been painted not later than 1611. Figure 46 is a reproduction of the painting.¹ Crowned single hearts appear also, the two forms being attached to the low cut neck of the dress and fastening the front all the way down just as Iroquois women later commonly wore them.

In the center of the neck border is a particularly interesting brooch (see fig. 47). It is one clearly of Masonic import and shows the compasses, the arc of the circle, and the square supported by pillars. Near the top, bottom as worn, is another smaller decoration which seems a small right angle or square. As worn the brooch is inverted and it is interesting to note that the Iroquois almost always wore conventionalized Masonic emblems upside down. The small right angle may be a square but apparently it is only a device commonly found at the bottom of Scotch heart and crown brooches (see fig. 45*b*).

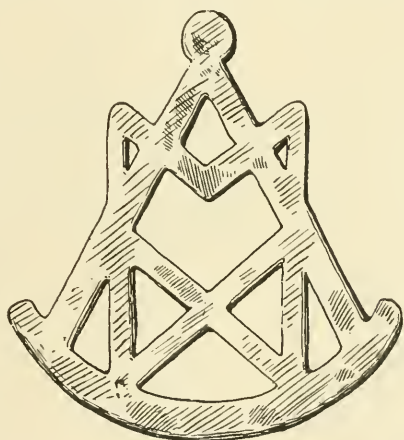


FIG. 47.—Detail of Masonic brooch shown in the painting of Pocahontas.

It has never been clearly understood by students of Iroquois ethnology just when the Masonic pattern came into vogue with the Iroquois. Brant was a Mason and other leaders have been claimed as such, but the Iroquois had plenty of opportunities before that time of seeing the Masonic emblem as displayed by the Scotch and English traders and explorers that came among them. The

¹ Reproduced by courtesy of Lathrop, Lee and Shephard, Boston, from *The American Indian*, by E. S. Brooks.

Masonic emblem worn by Pocahontas as an ornament, shown in the painting referred to, would seem to point out that the Atlantic coast Indians influenced by British colonists had seen the emblem as early as the settlement of Jamestown. Later this emblem was used by the Iroquois as a decorative motif in their silver ornaments and was conventionalized in many ways. In almost all cases, however, they regarded the bottom of the design as the top and thus placed the arc of the circle at the top and the joint of the compasses at the bottom. In this position the arc and the square resembled somewhat the crown on a heart brooch, while the round hinge of the compasses resembled the knob at the lower point of the heart on Scotch brooches (see fig. 45, *b*). Because of this fancied similarity the "Queen Mary's heart" design and the Masonic emblem became blended in the conventionalized patterns that grew out of both motifs. How the idea of similarity might develop may be understood by inverting figure 48, *a* and *b*, and comparing them with the heart brooch in figure 45, *b*. Here the openings in the crown—with the Iroquois, the eyes of the owl—are suns and moons in the Masonic design and the arc of the circle is construed as a plain top of the crown—with the Iroquois, the owl's head. Then are there only three small differences: in the heart (owl) pattern the sides are curved while the sides of the compasses are straight; the apex of the heart is pointed in Iroquois brooches or rarely there is a small bird's head, while the top of the compasses terminates in a circular hinge; and in the heart the triangular opening at the middle of the base of the crown points downward to give a symmetrical border to the heart, while in the Masonic type the angle of the square points upward (viewed in the reversed position). In the Scotch crowned hearts, as previously mentioned, the heart sometimes has at its apex a knob or trifoliated projection which might easily be interpreted as similar in import to the head of the compasses. These differences only accentuate the similarity of the two forms as viewed by the Indians.

The simpler form of the Masonic emblem as employed by the Iroquois is shown in the Iroquois-made brooch illustrated in figure 48, *a*. Apparently it is a copy of some past master's jewel. Figure 48, *b*, is nearly the same except that for the sake of balance the sun

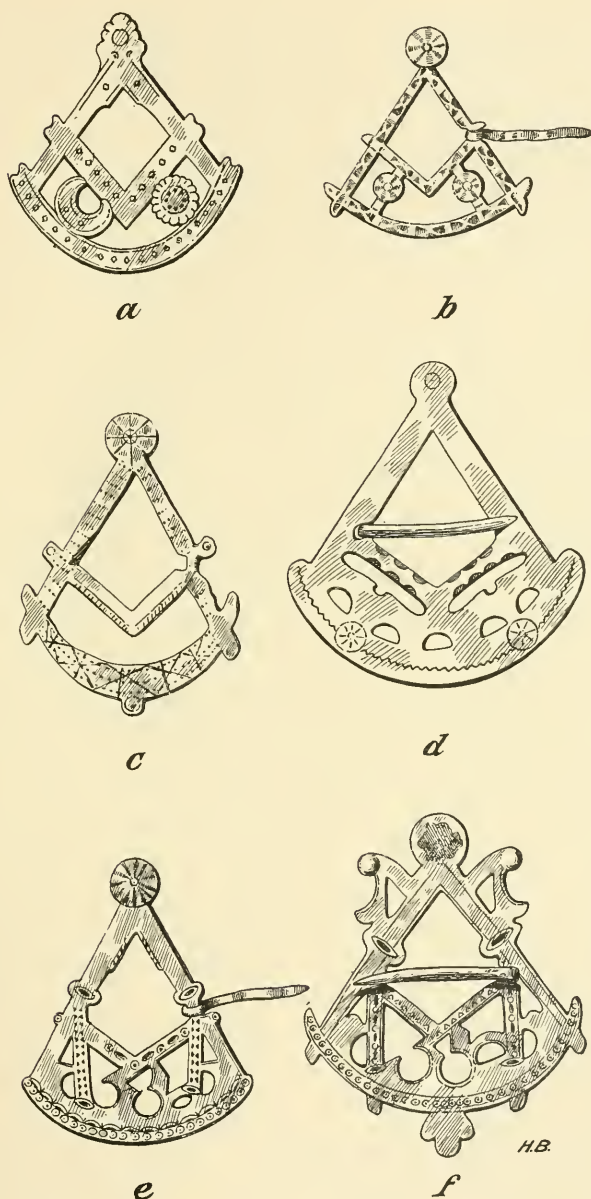


FIG. 48.—The simpler forms of Iroquois silver brooches of the Masonic motif.

and the moon have been turned into suns without rays. In 48, *c*, the sun and moon are lacking and we have what appears to be a try-

square. In figure 48, *d*, the space between the square and the arc has been left filled but the decorations which are fretted out still leave the arc and the square untouched. The suns here appear only engraved. Figure 48, *e*, represents another type and one similar to the Pocahontas brooch. The small pillars here appear and though they are conventionalized they may be recognized. In this brooch the arc of the circle does not appear free though its upper side is distinguished by decorations that outline it. Above the arc in the next figure (48, *f*), are odd designs punched out. They are similar, varying little in shape, in all brooches of this type. In fig. 48, *f*, as in fig. 48, *e*, the first fretwork design inside the base of the pillar might appear to be a trowel but this is probably not the case. More likely these fanciful outlines are only the result of an attempt to punch five circles at regular intervals and at the same time to leave the square free and not to break into any other part of the design. In figure 48, *f*, the conventionalized pillars rise above and through the compasses and are attached to them at the top. On the bars of the compasses where the pillars intercept them are the Iroquois seed or "life" symbols.

A second stage of modification of this motif is shown in figure 49, *a*. Here the bars (legs of the compasses) are doubled and paralleled. This doubling the Iroquois call *dēio'wānge*, "two parallel lines." The idea of "doubling" probably originated from the "council square" brooch such as is represented in figure 45, *d*. In figure 49, *b*, is the ordinary "wolf-eared council fire" brooch of the Seneca, the interlaced bars representing the fagots of the fire. In figure 49, *c*, the fagots are shown and the flame bursting from the top (bottom as illustrated). In these patterns the arc as a feature almost disappears. Figure 49, *d*, shows the brooch with the arc metamorphosed to double and parallel squares. This is wrought by combining the original concept with the square-within-a-square council brooch (see fig. 45, *d*).

Another departure from the original motif is shown in figure 49, *e*. The pattern is rather more pleasing in its lines than the former and there are no prominent straight lines in it. In figure 49, *f*, it is even more difficult to recognize the Masonic motif than it is in figure 49, *e*. The Iroquois call the brooch represented in figure 49, *f*, the *oskwi'sā'*

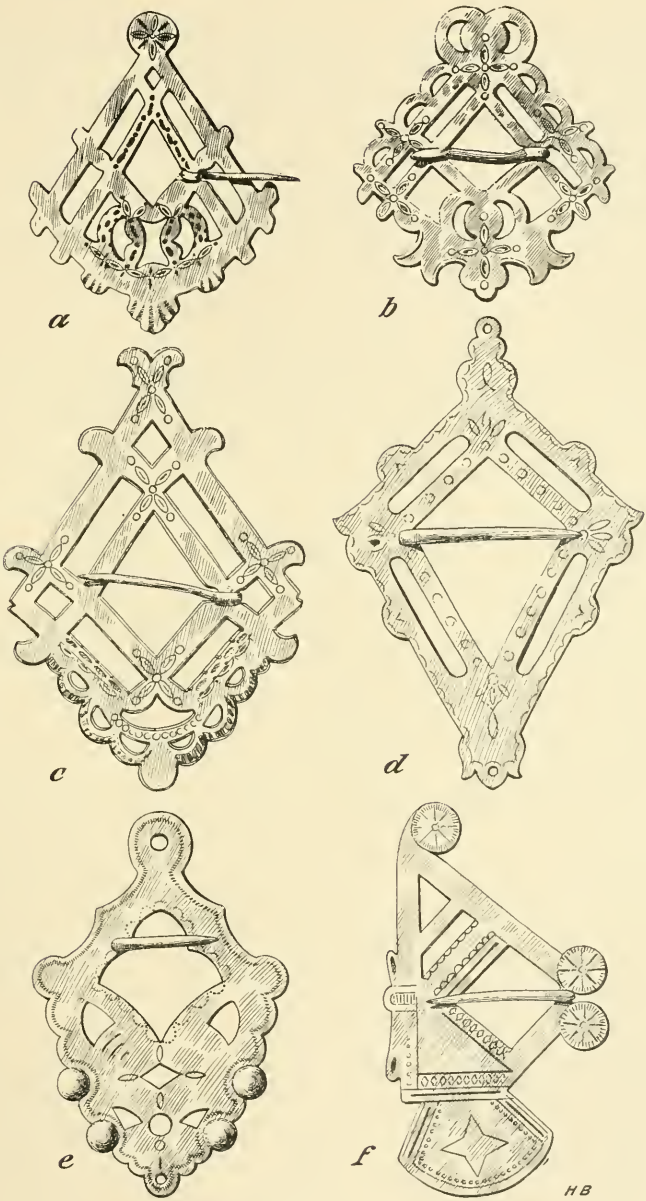


FIG. 49.—The more elaborate forms of Iroquois silver brooches of the Masonic motif.

or tomahawk. It appears to have been obtained by perpendicularly halving the Masonic design. Looking at it in this way, one leg of the compasses, the joint, and one arm of the square may be seen, while the blade of the tomahawk may or may not be derived from the arc of the circle.

This series of brooches affords a good illustration of how an original motif may become conventionalized and modified by other similar objects until the original design becomes almost unrecognizable.

Among other styles of Iroquois brooches are various forms of the star and circle. Ornamented stars of five, six, eight, nine, ten, eleven, and twelve points are enclosed in a decorated circular border, generally with scalloped edges. Hardly two brooches of similar pattern appear identical when the details of fretwork and engraving are closely examined. When stars appear without the enclosing band the points terminate in knobs or hemispheres. The circular or disk brooches are most frequently convex on the front surface and the pin hole is usually circular, though heart-shaped, and square openings occur in some instances. The square central opening is most often found in brooches where the "council square" motif is worked inside a circular border.

Iroquois circular and disk brooches are different from the so called "Algonquin" or "Delaware" types. Such are saucer-shaped, sometimes quite deep, or simply convexed on the upper surface. The former are generally small and plain with the central opening at the bottom of the saucer. The disk type is often large, those six inches in diameter being frequent. Brooches of this form, however, are stamped and engraved and seldom fretted. The workmanship of the Iroquois-made brooch is superior to the products of other tribes and may easily be distinguished.

Purely native patterns are extremely rare and the occasional example is found to be zoömorphie. The Iroquois silversmith preferred to cling to a motif as he found it and though he had ample opportunity to create his own designs few examples have been discovered. There seem to be certain reasons for this and the circumstance affords a text for more than a single venture.

If brooches of the loose-tongued buckle type were common

in Great Britain at the time of the discovery of America there is a possibility that they might have crept into the trader's store of more precious things and thus have worked their way into the esteem of the Indians at a comparatively early period. If the painting of Pocahontas is contemporaneous, as I am assured it is, the brooches represented on her dress would seem to confirm this and indicate that the Indians might have had brooches from traders and colonists as early as 1607. As a matter of fact, however, they do not appear to have become familiar articles with the Indians until after the beginning of the eighteenth century, and then not until the end of the first quarter. They are not found in Indian graves before this period as far as I have been able to discover.

NEW YORK STATE MUSEUM,
ALBANY, N. Y.

NATIVE ACCOUNT OF THE MEETING BETWEEN LA PEROUSE AND THE TLINGIT

By G. T. EMMONS

LITUYA BAY is a deep, narrow inlet penetrating the American mainland just beyond that point where the broken, rocky part of the north Pacific coast gives place to the broad, sandy shore of the Gulf of Alaska. Originally the bed of a great glacier it has long since been taken possession of by the sea, that floods and ebbs through its restricted entrance with a force that makes it the most justly dreaded harbor on the Pacific coast. At its head it branches into two arms, at right angles to the original course, which receive much ice from a number of active glaciers. The narrow mouth is still further contracted by half submerged ledges and sand spits that extend from either shore, and the constant warfare of the ocean waves and tidal currents have formed a bar, over which the rollers break with terrific force, and, except in fair weather, at slack water, the passage is fraught with extreme peril. Within, the calm is almost supernatural, the mirror-like surface of the water, protected by steep, high shores, is unaffected by winds from any quarter, and reflects with the truth of reality the translucent ice tints of the floating bergs as they are carried hither and thither by each recurring tide. These peculiar conditions in times past attracted the sea otter in great numbers, and, notwithstanding the dangerous waters, this has always been a favorite hunting ground of the natives from Chatham Straits to Dry Bay.

Lituya is a compound word in the Tlingit language meaning "the lake within the point," and the place is so called from the almost enclosed water within the extended spit. On the maps of the eighteenth and nineteenth centuries it appears variously as Port Française, Altona, Alituya, Ltooa, as well as Lituya.

Like primitive peoples elsewhere the Tlingit endowed all nature with spirit life, and so accounted for the many mysteries that compassed them about. In their imagination, the glacier

was the child of the mountains, born in regions of eternal snow, and, when its arch-enemy the sun looks down to destroy it, the parents tear the rocks from their sides and scatter them over the surface for protection; in the scintillating aurora they saw the warrior spirits at play in the highest heaven; and when nature was at its best the spirit of the tree and the rock came forth as the shadow and slept upon the calm waters. And so the legend of Lituya tells of a monster of the deep who dwells in the ocean caverns near the entrance. He is known as Kah Lituya, "the Man of Lituya." He resents any approach to his domain, and all of those whom he destroys become his slaves, and take the form of bears, and from their watch towers on the lofty mountains of the Mt Fairweather range they herald the approach of canoes, and with their master they grasp the surface water and shake it as if it were a sheet, causing the tidal waves to rise and engulf the unwary.

It can be seen how this phenomenon appealed to the Tlingit, as of all deaths that by drowning was alone dreaded. The end might come in any other way and he met it unflinchingly, with perfect resignation. But his crude belief in a future life of comfort and warmth required that the body be cremated, while, if lost in the water, its spirit must ever remain in subjection to some evil power.

This legend of Lituya is illustrated by a carved wooden pipe (fig. 50),¹ of splendid proportions, which was obtained in 1888 from the chief of the Tuck-tane-ton family of the Hoon-ah Kow, who claimed this bay as his hereditary sea-otter hunting ground. It was used only upon occasions of particular ceremony—when the clan assembled to honor the dead, or to deliberate upon some important question of policy. At one end is shown a frog-like figure with eyes of haliotis shell, which represents the Spirit of Lituya, at the other end the bear slave sitting up on his haunches. Between them they hold the entrance of the bay, and the two brass-covered ridges are the tidal waves they have raised, underneath which, cut out of brass, is a canoe with two occupants, that has been engulfed.

In 1786 La Perouse, the French navigator, in his exploration of the Northwest Coast to the southward of Bering Bay, when abreast of the Fairweather Mountains, descried an opening in the

¹ This illustration was furnished through the courtesy of Mr George G. Heye, in whose collection the pipe now is.

shore which his boats entered and reported as an available anchorage. The following day he stood in for the entrance, which he had hardly gained, when the wind hauled ahead, and, notwithstanding he shivered his sails and threw all aback, he was carried in by the irresistible force of the flood, and narrowly escaped shipwreck. He

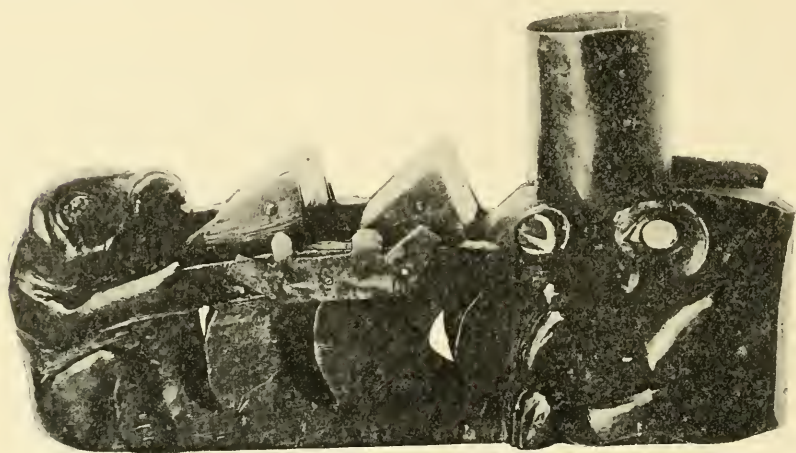


FIG. 50.—Pipe illustrating the myth of Lituya Bay.

remained here twenty-six days making observations, surveying, and trading with the natives. He gave to the bay the name of Port des Françaises and his minute description of the country and its inhabitants forms one of the most pleasing and exact records that has come down to us from any of the early narrators. But his visit was made most memorable by the loss of two of his boats and their crews of twenty-one officers and men, in their attempted reconnaissance of the mouth of the bay.

In 1886, one hundred years after this event, Cowee, the principal chief of the Auk qwan of the Tlingit people, living at Sinta-ka-heenee, on Gastineaux Channel, told me the story of the first meeting of his ancestors with the white man, in Lituya Bay, where two boats of the strangers were upset and many of them were drowned. This narrative had been handed down by word of mouth for a century. These people possess no records nor had the chief, who spoke no word of our tongue, ever heard of La Perouse from

outside sources; so we can here authenticate by an exact date a most interesting piece of native history in detail, the truth of which is substantiated by the fact that La Perouse was the only one of the early navigators to visit this locality in a large ship and by the attending loss of life in the destruction of his two boats.

Before the coming of the white man, when the natives had no iron, the Chilkat and Hoon-ah made long canoe trips each summer to Yakutat, to trade with the Thlar-har-yeek for copper, which was fashioned into knives, spears, ornaments, and tinneh¹ and which again were exchanged with the more southern tribes for cedar canoes, chests, food boxes, and dishes.

One spring a large party of Thluke-nah-hut-tees from the great village of Kook-noo-ow on Icy Straits, started north, under the leadership of three chiefs—Chart-ah-sixh, Lth-kah-teech, and Yan-yoosh-tick.

In entering Lituya, four canoes were swallowed by the waves and Chart-ah-sixh was drowned. The survivors made camp and mourned for their lost companions. While these ceremonies were being enacted, two ships came into the bay. The people did not know what they were, but believed them to be great black birds with far reaching white wings, and, as their bird creator, Yehlh, often assumed the form of a raven, they thought that in this guise he had returned to earth, so in their fright they fled to the forest and hid. Finding after a while that no harm came to them, they crept to the shore and, gathering leaves of the skunk cabbage, they rolled them into rude telescopes and looked through them, for to see Yehlh with the naked eye was to be turned to stone.

As the sails came in and the sailors climbed the rigging and ran out on the yards, in their imagination they saw but the great birds folding their wings and flocks of small black messengers rising from their bodies and flying about. These latter they believed to be crows, and again in fear they sought the shelter of the woods.

One family of warriors, bolder than the rest, put on their heavy coats of hide, the wooden collar and fighting head-dress, and, armed with the copper knife, spear, and bow, launched a war canoe.

¹ The well-known "coppers" or shield-like pieces that might be considered as money, and which had a fixed value in accordance with their size.

But scarcely had they cleared the beach when a cloud of smoke rose from the strange apparition followed by a voice of thunder, which so demoralized them that the canoe was overturned and the occupants scrambled to the shore as best they could.

Now one nearly blind old warrior gathered the people together, and said, that his life was far behind him and for the common good he would see if Yehlh would turn his children to stone, so he told his slaves to prepare his canoe, and, putting on a robe of the sea otter, he embarked and paddled seaward. But as he approached the ships the slaves lost heart and would turn back, and all deserted him save two, who finally placed him alongside. He climbed on board, but being hardly able to distinguish objects, the many black forms moving about still appeared as crows, and the cooked rice that they set before him to eat looked like worms, and he feared to touch it. He exchanged his coat of fur for a tin pan and with presents of food he returned to the shore. When he landed the people crowded about surprised to see him alive, and they touched him and smelled of him to see if it were really he, but they could not be persuaded to eat the strange food that he had brought to them.

After much thought the old man was convinced that it was not Yehlh that he had gone to and that the black figures must be people, so the natives, profiting by his experience, visited the ships and exchanged their furs for many strange articles.

It was at this time that two boats were lost at the mouth of the bay and many of the white men were drowned.

PRINCETON, N. J.

WAR CUSTOMS OF THE MENOMINI INDIANS

BY ALANSON SKINNER

THE Menomini Indians recognized, roughly, five callings; prophecy, medicine, jugglery, sorcery, and war. Hunting, fishing, and agriculture were universal occupations, for, although such gifted persons as prophets, doctors, jugglers, and sorcerers were often able to eke out their existence through the fees which they extorted from their patients or clients, men of fame or ability great enough to gain them a living in this way alone were rare.

War was the one profession open to every one; all others required not only skill and training, but a certain acquaintance with the supernatural which was not vouchsafed to ordinary mortals. These miraculous gifts also played their part in warfare, but to a more limited extent. Any man could be a warrior, but, as a general thing, only those who received divine inspiration could be leaders.

Every man above the age of puberty was a potential warrior. From his earliest youth every male looked forward to the day when he could take his place among the fighting men, and devoted much of his spare time in acquiring dexterity in the use of weapons, and endurance on the warpath. The actual combats were never battles fought in the open between large bodies of soldiers; flying raids by small parties, ambuscades, and, particularly, night attacks, were the rule.

According to tradition the fundamental principles upon which their strategic tactics were founded, and the sacred palladiums which they relied upon for success, were derived from the Powers Above.

In that mythical early period in which all Menomini legends take their origin, the Sun and the Morning Star looked down upon their grandchildren, the children of men, and were filled with pity for their suffering, so they called a council to decide what could be done to bring about a better order of things. They sent for the

"Swift-flying-birds,"¹ the Buffalo, the Weasel, and the Pine Snake, all of whom came to the council out of pity for their neighbors, the children of men.

The "Swift-flying-birds" promised to endow the warriors with power to travel as fast as they can fly, and, if the braves were defeated, they were empowered to put on the birds' skins and escape by flying.

The Buffalo gave them his strength and courage, and the Weasel agreed to help the warriors stalk their foes even as he pursues his game. He said that they should be as successful in taking scalps as he is in capturing his prey.

The Pine Snake promised that they should have his ability to hide away in the undergrowth to spy upon the enemy, or to escape if they should be hard pressed.

When the animals had completed their donations, the Sun and the Morning Star gathered the presents into a bundle, sent for the Thunder-birds,² and gave it to them to transmit to the children of men. As soon as they had received the package, the Thunder-birds called an Indian up to their home in the western sky, and gave it to him with the promise that if he followed their directions he would always be successful in battle. The Thunder-birds further desired that he should present the bundle with tobacco, and pray to it from time to time. They promised him that whenever he did this they would hear his prayers.

They gave him a rare blue powder with which he was instructed to paint the faces of the injured warriors. He was assured that if he did this the blood would run from their wounds and they would recover. Then the Thunderers taught him the sacred songs that go with the medicines to make them efficacious, and permitted him to depart. Since that time worthy men have received the proprietary right to the war-bundle from the Thunderers.

In order to present a correct idea of the means employed in securing these charms, I shall give in full the story of a bundle which was formerly the property of a man named Watakona. This hero,

¹ The Hawks, the Swallows, and the Humming-birds.

² The Thunderers are imaginary birds who dwell in the western heavens. The flashing of their eyes is the lightning, and the sound of their voices is the thunder. They occupy a prominent place in Menomini tradition.

when young, was ambitious to receive recognition from the Powers Above. He painted his face with charcoal, and fasted, and prayed for their favor so often that at length all the manitus became aware of his devotion. Still he continued to call upon them.

Finally the Inämäkiwuk, or Thunderers, took pity on him and sent him word, through a dream, to build an elm-bark canoe and launch it in the ocean. He was instructed to take a straight course westward until he came to an island of rock projecting high above the surrounding waters. Here the vision told him he would find the Thunderers.

When Watakona awoke he was full of joy, for he knew at last his prayers were to be answered. He washed the charcoal from his face and broke his fast. Then he built the canoe in secret. When it was finished he carried it to the ocean, and set out as he had been instructed.

After he had travelled for a long time he came to the island. Here were gathered a great number of Thunder-birds, waiting for him. As soon as he had landed, the chief of the Thunderers, who was greater and handsomer than all the others, came forward and addressed him as follows:

"Nosé (grandchild), you have come to me according to my command, for I was troubled in heart when I saw you fasting and suffering, growing light in flesh and thin in body. Now you have gained great honor, for I have taken pity on you. I am going to give you the war-bundle to use upon the earth. You shall feed it, and give sacrifices to it for my sake, and in my behalf. You shall be empowered to use this thing at your desire. It shall protect you, and your children, and grandchildren, so that you and they shall live to a ripe old age. I command you to use it in the way in which I shall make clear to you, and if you obey me it shall obey you.

"Tobacco shall be the chief thing to please it, and when you give it tobacco you will please us, its masters. You shall take these things which I have here back to the earth again, and, when you reach your home, you shall make some others according to my instructions.

"Here is an egg; put that in the bundle. Here is a powder; put that in the bundle. These two articles shall enable you to set fire to the earth at your desire. Here is a little bow, and the image of an arrow, and a scabbard to carry. Here are all the birds of the air, that are after my

kind. They will assist you when trouble overtakes you. Take this red paint along, that you may apply it to your men who accompany you when you go to war. It will protect you, and the sight of it will please me. It will put new life into you and your men.

"Through my magical power I gave you the dream that called you here to see me. You shall be able to destroy the enemies that intend to kill you. You shall conquer, and victory shall always be yours. The enemies that you shall slay will be as food for me, and for the war-bundle.

"When you return you shall carve my image upon a board and place it in the bundle, in order to please me. You must take two plain square blocks, and upon each of these outline my figure in sacred red paint; one shall represent me as a Great Powered Bird, and one shall represent me as a man with a flint-lock gun in my hand. I am of dual nature. I can change myself into either a bird or a man at my will.

(And indeed the Thunder-bird-beings have been known to come to earth in human form. They have appeared as homely men, short and thick-set, with heavy muscles in their arms and legs, and bearing a bow and arrows in their hands. Ordinary persons can scarcely recognize them as Thunderers, but those who have received power from them in their dreams, know them at once for what they are.)

"I give you the power to know and see me in your night sleeps. You shall be forewarned of your enemies' plans. You shall know beforehand whether you shall win or lose your battles. You shall do all your fighting at night, and you shall destroy your enemies during their sweet sleep.

"Before you go out to war you shall first prepare and give feasts to the war-bundle. You shall sacrifice to it in behalf of the Thunder-birds. You shall receive that for which you ask us, for I shall assist you. Call on me through those sacred things which I have given you, and you shall have the thick fog settle down and hide you from the eyes of the enemy so that you may escape under its cover. You shall have the lightning and hail to cripple the wicked foe when he troubles you.

"You shall seek your enemy in the night through this bundle. You shall approach him with the stealth of the snake in pursuit of its prey, and encircle his village. Let each warrior carry the image of one of the medicine birds with him, with a single quill-feather fastened in his hair, and, as the humming-bird is so small in flight that none can hit it with a rifle ball, so will each warrior be. As it is impossible to strike the edge of a knife blade ground sharp and held off edgeways from the body, so shall you and your warriors be. These things I say to you that you may

understand the power of the medicines that I have placed in the war-bundle.

"You shall make incense of a portion of each of the sacred roots that I have included, and you shall purify yourselves with the fumes. You shall carry a little of each in your mouth, and you shall chew some of them and spray yourselves and your warriors with your saliva, that they may elude the keen vision of the enemy, for the eyesight of the enemy shall be destroyed when they approach.

"When you have drawn near and surrounded the village, you shall signal on the war whistle, and you and your warriors shall rush to the attack. You shall destroy the sleeping enemy with tomahawks and war-clubs that have been kept in the powerful medicines until they are saturated. Those who awake shall try to escape, but can not, for the medicines which I have given you shall sap their strength and numb their minds. When a warrior takes a scalp he shall lick the fresh blood from it; this he must do as a sign that the enemy are devoured in behalf of us, the Thunderers.

"When the fighting is over, then you shall make a great ceremony with dancing, for the war-bundle, and for us, the Ināmikiwuk, or Thunderers. You shall thank us for the assistance which we have rendered you. Then you shall sing the songs for the scalps that have been taken with valor.

"Always respect the war-bundle which we have given you" (commanded the Thunder-bird-being). "Be careful to keep it tied up with a string, and keep it hung in a place by itself, outside of the house, away from the women, including the maidens who are just arrived at the threshold of womanhood. Especially keep it concealed from those women who are having their monthly courses. The bundle must never be opened for nothing, as that will be a serious offense to it, and to us, the Ināmikiwuk. It may only be opened in time of peril, or when you sacrifice to it in the spring or in the fall of the year, for our sake.

"And this is not yet all that I have to say" (said the chief of the Thunder-bird-beings to Watakona). "One thing that you must make when you get home, or which the women may make for you, is a pack-strap, *apékon*. This you shall make of *pésémékuk*, of coarse long beads. It shall be put in the bundle to be kept as a reward for the brave warrior who kills a chief or leader among the enemy. It shall be given to him as a great honor."

When he had heard these words, Watakona took the sacred gift and hastened back to impart his knowledge to his people.

As I have previously stated, during my residence among the Menomini, and since my return to the East, I have been so fortunate as to obtain three of these sacred bundles, and their rituals. In certain fundamental features these palladiums are alike. All of them contain the skins of the sacred birds of war, the "Swift-flying-birds," and snake and weasel skins. In two of the bundles buffalo tails were found, for according to some traditions the bison was among the animals who agreed to help mankind. Other invariable features are the reed whistles for signaling to the braves, deer-hoof rattles for accompanying the sacred songs, and the paint given by the Thunderers to cure the wounded.

The rest of the contents of the bundles varies in accordance with the instructions given in the dream of the owner. One may contain small medicine war-clubs, charms for the warriors to carry into battle; another a quill-worked bow, a scabbard, or some other valued trinket. Although tradition states that an embroidered pack-strap or its equivalent should be present, kept as a gift to that warrior who slays a chief of the enemy, none of these were found in the bundles which I have collected, but in two cases it was asserted that the straps had been given out to warriors who had earned them. The inner wrapping of the medicines should always be a white-tanned deer-skin, whence they get their popular name, *wapanak an*, or "white-mat." The external wrapping is usually a reed mat, but as a second choice a woven bag of Indian make will do.

The bundles are inherited by the children of the owner. If one should descend to a woman, she usually instructs her nearest male relative in its rites, but he can not use it unless he has been given permission by the Thunderers. A man who has the right to own the war-bundle may buy one from another man at a great price. Women are occasionally empowered by the Thunderers to possess the bundle, and tradition tells of several of these Amazons who were successful partisans.

The bi-annual sacrifices occur in the fall, and early in the spring when the voices of the Thunderers are first heard. A feast of meat is prepared—not a great deal, but enough for two or three mouthfuls—and this is placed in the little wooden bowls which usually accompany the bundle for this purpose. When the food is put into the bowls these songs are sung:

I.

"Nina natom ināniu, aiowéyu oskatonanon
Notowī katiné Awatuk."

("I am the first brave man to kill you,
I am truly the God.")

II.

"Kisihakwa kawétomon
Yom aké kawatomon."

("All day I tell you.
This earth I tell you.")

III.

"Awano Ospamonayon."

("In fog where I walk.")¹

Then the persons who prepared the feast eat it themselves in behalf of the Thunderers, who derive the benefit of the food. At the conclusion of the feast, tobacco of two kinds, both plug and smoking, is given to the bundle with these words:

"N'hau! Nasākasaton ayum Wapanakian
Misikta Ināmākiwuk kayaispakitinokuwa, yos okihi."

Which may be translated: "Now I sacrifice tobacco to you, White mat, and to the great Thunder-birds that made this and gave it to man and this earth."

The tobacco is placed in the bundle, and it is consumed spiritually by the Thunderers, although in substance it remains unchanged. It is well to remove this old sacrificial tobacco from time to time, putting back some that is fresh. The old tobacco may either be used at the place where the bundle is stored, or it may be taken home by the owner and his friends and consumed at their leisure. It may be smoked in their pipes, or cast on a dish of coals, or on the fire. In the latter case, the sacrifice should be accompanied by the words:

"I give a general smoke to all the Mānitus, and it shall be consumed according to the way of the olden times."

¹ These songs are probably repeated many times over, but I am unable to state this with certainty, since they were transmitted to me by Mr Satterlee without comment. The meaning of some of the songs is obscure, and no doubt *intentionally* so, as they are mysterious and sacred.

In the old days, when one of the Menomini villages decided to declare a general war for any reason, runners were sent to the other divisions, or, in more ancient times, when the totems lived apart, to the territories of the various clans. Each messenger carried tobacco and a string of wampum, "as long as a man is high," painted red as a symbol that blood was to be shed. Wherever these tokens were delivered they were instantly recognized by the recipients as an invitation to war, and the people either refused them, or gathered at some designated spot.

General wars were infrequent, and were only called in extreme cases to retaliate for tribal injuries. Small war parties were organized to settle some old score, or to furnish excitement for the young men.

Sometimes the Sun would appear in a vision to a bundle owner, saying:

"I am going to feed you. You shall eat. (Literally, 'Take your war-bundle and attack such a tribe.') I shall feed you and this war-bundle. Go and eat up (destroy) the enemy."

Word was sent out among the young men, who gathered and set forth. The Mikão, or leader, preceded the party with the war-bundle slung over his back. After they had gone forward for some distance they halted, and the Mikão caused a long lodge of boughs to be built. He entered the structure, opened the bundle, and spread out its contents. Then a dog was slain and eaten. Some of its flesh was offered to the bundle with tobacco, and a war-song was sung in praise of the contents of the palladium. It was as follows:

"Anom awaya katiné äwätakatun

Tatakésémakuton Ineko aioya

Awatuk oskeisetuk. Tatakésémakatun."

("These things we use are truly of God power.

Powerful are the things that we use.

God said they shall be powerful.")

The war-dance was next enacted. It was a spirited spectacle. The warriors threw their bodies into dramatic postures, giving the war-cry and singing the war-song to the thumping of the tambourine

or small water-drum. With this dance went the following three songs, which were sung before the party proceeded:¹

I.

"Anéos nawataponéyun
Aioanonéyun."

("Where I volunteer to fight
As I am walking along.")

II.

"Nésa yanisim
Osowätokéyon."

("Savage I am.
As God I am.")

III.

"Wapano natäkgam."
("Brave I am called.")

When the country of the tribe to be attacked was reached, scouts were sent out to report the whereabouts of the enemy. As soon as the villages of the foe were located, the war-party approached during the night according to the instructions of the Thunderers. Just before daybreak, at the hour when sleep is soundest and man's vitality is said to be at its lowest ebb, was the favorite time for the assault. When the marauders had drawn near, the Mikäo opened the bundle and sang this sacred war-song to the accompaniment of the deer-hoof rattles:

"Ninäné aiata potcnéu
Äwätuk aiawéyon."

("I myself, I am surely,
Over and over, God I am.")

This song stupefied the enemy and caused them to sleep more soundly. Then the leader distributed the sacred medicines among his warriors, according to the instructions given by the Thunderers, giving to one the skin of a bird or a weasel, to another a tiny carved

¹For the second song the deer-hoof rattles are preferred to the drum. All three songs are probably repeated many times.



FIG. 51.—Menominee warrior bearing old style war-club and wearing an otter skin headdress with two eagle feathers, denoting two slain enemies.

war-club, or a feather, until each one had some charm. The men bound these on their heads or bodies and slipped out to surround the village. When the camp was encircled the Mikão gave the signal and the warriors began the combat.

The fighting was done principally with bows and arrows, but men who had received promises of protection from the Thunderers often carried clubs alone (see fig. 51). Many wore arm-bands to which were attached metal jinglers called *nanihawnen*. The sound of these was thought to be efficacious to lull the slumbering enemy. There were songs for dealing the death blow.

While the members of the party were fighting the Mikão stayed behind with the bundle, and he took no part in the fray. Indeed he was often unarmed. As fast as scalps were taken they were brought to him by the successful warriors, who received some present from the bundle as a reward. If a brave found and scalped the body of a man whom he had not killed, it was not considered such a feat as though he had slain the foe himself. He announced the fact and received praise, but no compensation.

The Menomini endeavored to take the entire scalp, including the skin over the forehead, but if there was not time enough for this, a small piece, including the place where the hair radiates from the crown, was sufficient. While the scalp was fresh the warrior licked the blood from it to symbolize the devouring of the enemy by the Sun.

When the fighting was over, the party returned. On the way back the warriors spent their leisure time stretching the scalps on hoops and drying them in the sun. The bundle contains a noxious medicine which was rubbed on the inner surface of the scalps, that if any one had been scalped and still lived he would die, no matter how far away he might be. As the party drew near their village, the people came out and met them with great rejoicing.

When they reached the place where the ceremonies were held on the outward journey, the scalp-dance was given to proclaim the miraculous power of the war-bundle. In the bough lodge the Mikão announced the tidings of victory, reciting the brave deeds done, and the names of the heroes. Some of these men were entitled to change their names as an honorary distinction, and others were

given the right to wear the eagle feather on their heads. Only those who had killed an enemy were allowed such appropriate insignia of bravery, and the feathers of no other bird had any meaning except for ornament.

When this rite was over the men came forward to "dance their scalps," and there was then enacted the most spectacular of all Menomini ceremonies, the scalp-dance.

Seizing the scalp the warrior sang his victory song, relating the incidents of his achievement, as he reenacted the scene. Slowly at first he stamped about the circle to the beat of the drum, then faster and faster, twisting, turning, swaying, bending his half-naked body into a kaleidoscopic series of dramatic postures, his paint-daubed face ablaze with emotion, his song now and again interrupted by the spasmodic war-whoops that burst from his excited lips.

As he leaped about the lodge his hearers followed every motion with intensity, giving half conscious guttural ejaculations of surprise and approval. At last, when the warrior had worked himself almost into a frenzy, his sister or nearest female relative came forward and took the scalp from him, making him in return a present of fine cloth or other goods "to wash the blood from his hands."

The scalp now became the property of the woman, who ornamented it, and kept it forever, as a trophy of her brother's valor. If a man had no female relatives to "wash his hands," the scalp became the property of the bundle. These left over scalps were put inside the bundle and kept there until the following spring, when the bi-annual ceremony was held. All the war-bundle owners in the tribe repaired to a secluded spot where they offered tobacco and prayers to their patron deities. Then all the bundles were opened and a feast given, at the close of which the owner of each bundle called on several warriors of renown to dance for the unredeemed scalps.

Each man responded, and taking a scalp in his hand he danced to the rhythm of a great drum, recounting the circumstances of its capture. All the onlookers, even the women, joined in the dancing and singing. At length the sister of the warrior washed his hands with presents and took the scalp from him, so that in the end the trophies accrued to the women. This ceremony was thought to add greatly to the glory and strength of the war-bundles.

The annual ceremony is still held in the form of a feast, but "in these degenerate days" there is no attendant scalp-dance. Game is preferred for the feasting, but when it can not be obtained a dog serves the purpose. This modern ceremony, and the rite of feeding and giving tobacco to the bundles, is to please the Thunderers so that they will continue to sweep the earth with the winds and scour it with rain, that it may be clean and habitable for mankind (see fig. 52).



FIG. 52.—Interior of Medicine Lodge during a ceremony given to persuade the Thunderers to release one rain. The cross (X) marks several war-bundles suspended from the roof.

In conclusion it must be said that the Menomini never tortured their captives. On the contrary, prisoners were always kindly treated and were usually adopted. The tribe considered capture in war the height of misfortune, and to inflict torments on one so unlucky as to be taken prisoner was thought to be offensive to the "Overhead Beings."

The modern Menomini are losing their faith, and the knowledge of the old ways, but the belief in the efficacy of the war-bundle dies hard. As late as the Civil War the Menomini soldiers in the Wisconsin regiments carried these fetishes to the field with them, and one was used at Gettysburg.

AMERICAN MUSEUM OF NATURAL HISTORY,
NEW YORK CITY.

PROCEEDINGS OF THE ANTHROPOLOGICAL SOCIETY
OF WASHINGTON

Meeting of October 18, 1910

The 448th regular meeting was opened by the president, Dr J. Walter Fewkes, in the hall of the Public Library, October 18, 1910.

The speaker of the evening was M. CAPITAN, Professeur au Collège de France, who delivered a discourse entitled, *Aperçu sur l'Archéologie Préhistorique de la France*, illustrated with lantern slides. The lecturer illustrated and described Swiss dwellings, dolmens, and numerous implements of the chase used by the prehistoric races of France. Frequent comparisons were made with archeological objects from America. It was shown that religious and superstitious motives largely entered into the making of the earliest rock inscriptions.

Among the views shown were a reindeer found at Bruncquill; horses' skulls; elephants; female figures on rocks and stelæ from Mas d'Azil; a reproduction of the grotto at Lourdes, as also carved and incised figures of the horse and hippopotamus. The grotto of Eyzies, Dordogne, where Mr Otto Hauser has carried on extensive excavations, was also shown on the screen. Other slides illustrated household furnitures and utensils. It was also pointed out by the lecturer that the prehistoric inhabitants made use of the elevations and rugged surfaces in the rocks in the delineation of their drawings.

Meeting of November 15, 1910

The 449th regular meeting was held in the hall of the Public Library, November 15, 1910, with the president, Dr J. W. Fewkes, in the chair.

The first paper of the evening was on *New England Life in Old Almanacs*, by Mr GEORGE R. STETSON. The earliest almanac extant from New England is dated 1645. The almanac literature forms quite an extensive library. In the Astor Library there are recorded about 2,000 titles. Besides the calendarium proper, the almanacs contain information and give advice on all the relations and conditions of life. Much attention is given in them to the movements of the celestial bodies and their phenomena, especially to comets. In fact, the old almanacs, like many of their later successors, were small cyclopedias, and thus shed much instructive and interesting light on the life of the times in all its relations and phases.

Dr ALEŠ HRDLIČKA followed with an account of the exploration of *An Ancient Sepulcher at San Juan Teotihuacan, with Anthropological Notes on the Teotihuacan People*. San Juan, which is about forty miles distant from the City of Mexico, was the sacred city of what was perhaps the first civilized race that inhabited Mexico. The site is marked by two stepped pyramids, called the "pyramid of the sun" and the "pyramid of the moon" respectively. They are faced by a court of monuments, which are assumed to have been temples, called the "street of the dead." The grave opened by Dr Hrdlička was situated about 250 yards southeast of the E.S.E. corner of the pyramid of the sun. In this grave, which was shielded by two cement floors (aside from layers of earth and rubble), were found two skeletons, one of a man about forty-five years of age, the other of a woman of over fifty years of age, buried in the classic contracted fetus-in-utero position. Both bodies must have been interred simultaneously for there was no displacement of any of the bones. They lay parallel, with heads to the east. Near the skeletons were found earthenware dishes, fragments of mother-of-pearl rings, beautiful obsidian knives of the long, slightly curved, flake variety, a shell disk, and a bowl provided with three short legs. The bones show no traces of disease or any injuries in life, but both the crania are artificially deformed; this is especially true of that of the female. The deformation is of the fronto-occipital variety. But the deformation is not so great as to prevent the recognition of the original type of the crania—they were both brachycephalic. The stature of the two individuals, as far as can be judged from the bones, was rather above medium, as compared with that of the present native population in the valley, and the same may be said of the strength of the bones.

Dr Hrdlička called attention to the following points of interest connected with the find: (1) the peculiar construction of the grave; (2) the fact that here were buried together an adult man and an adult woman suggests a sacrifice of the woman on the occasion of the death of her husband; (3) here is for the first time found what looks like clear evidence that the artificial head-deformation of the flathead type was actually practised by at least a part of the ancient inhabitants of these regions; and (4) it is evident that the ancient builders of Teotihuacan, or at least an important part of them, were of the brachycephalic type.

The two skeletons, as well as the objects found with them, are deposited in the San Juan Museum.

The paper was discussed by Messrs Lamb, Fewkes, Hewitt, and Gronberger.

Meeting of December 20, 1910

The 450th regular meeting was held in the hall of the Public Library, December 20, 1910, with the president, Dr J. Walter Fewkes, in the chair.

The paper of the evening was on *The Winnebago Winter Feast*, by Mr PAUL RADIN. The speaker gave a description of the ceremonies incident to this feast and dwelt on the religious and social elements connected with the celebration.

In the discussion, which followed the reading of the paper, Dr Swanton stated that among the Indians of the Pacific coast the corresponding ceremonies are observed on the death of an uncle and to strengthen a chief, but in either case the social element predominates over the religious. Mr La Flesche pointed out that among the Plains tribes the feasts are held about spring time, when life is awakened, heralded by the arrival of thunder. Mr Hewitt and Dr Fewkes gave parallels from the Iroquois and the Hopi Indians respectively.

Meeting of January 17, 1911

The 451st regular meeting was held in the hall of the Public Library, January 17, 1911, the president, Dr J. Walter Fewkes, in the chair.

The first paper of the evening was on *The Totemic Complex*, by Dr A. A. GOLDENWEISER. The speaker first gave a brief survey of the study of totemism from the latter half of the nineteenth century to the present time, as represented by Frazer, Morgan, Lang, etc., in England, and by Boas and others in America. He then pointed out the difference of conception and method between the British and American investigators and subjected the English point of view to a thoroughgoing criticism. This point of view is evolutionary and comparative. It assumes totemism as a necessary stage in the evolution of religion and hence, wherever it could trace the existence of one of the supposed elements of totemism, such as exogamy, tabu, or totemic names, it assumed the existence there of the full totemic system. In this way totemism was attributed to the ancient Egyptians, the Romans, the Semites (by Robertson Smith). Dr Goldenweiser pointed out that the various features of totemism, such as exogamy, tabu, and descent from an animal are not necessarily found united, but may and do exist separately and independently from one another. Totemism can, therefore, not be studied as an organic whole but in its various elements. The element of descent is the main feature which gives a social coherence and stability to a social group. Next to this in importance is the bond of union formed by common ceremonies.

The second paper was on *The Medicine Arrows of the Cheyenne*, by Dr TRUMAN MICHELSON. The speaker's informant was one of the two candidates for admission at the ceremonies in 1908. These consist of a long ritual, songs, and prayers, and last through seven days. Of these the first three days are preliminary. The persons taking part in the ceremony are the chief priest, and the candidate or candidates who are to be initiated, each accompanied by a friend who acts the "old man." The participants live during the seven days in lodges or tents within a closed precinct. The speaker recited parts of the songs and prayers addressed to sky and earth. These are accompanied by processions, moving from lodge to lodge, burning of pieces of sweet grass, etc. The central feature of the ceremony consists in laying arrows on the ground, with their heads to the north. The officating priest goes through various motions, while the candidate breathes four times on the arrows. No woman may witness the ceremony.

Both papers were discussed by Messrs Swanton, Hewitt, Hough, Fewkes, and Casanowicz.

Meeting of February 21, 1911

The 452d regular meeting was held in the hall of the Public Library, February 21, 1911, with Mr George R. Stetson, vice-president of the society, in the chair.

Dr DANIEL FOLKMAR presented a paper on *Some Questions Arising in the First Census of European Races in the United States*. The speaker, who is chief of the section on the foreign-born in the thirteenth census, and author of the "Dictionary of European and other Immigrant Races," dwelt at some length on a new feature introduced in the present census, namely, of classifying the foreign-born by their mother-tongue, in addition to that by country or political allegiance. The main part of the discourse was, however, occupied by a defense of the terminology, or nomenclature, adopted in the schedules of the census and in the dictionary, viz., "race" to designate the linguistic divisions of the immigrants, and "nationality" for the country of birth. The speaker admitted that in anthropology and biology the term race is applied to physical traits, but maintained that with the census it was not strictly a scientific question but a practical one, to designate and distinguish given groups of peoples who come to the shores of this country. The use of the term "race" seemed to him justified to designate linguistic groups, inasmuch as it points out something essential, that which descends by heredity.

The paper as well as the dictionary, which the author laid before

the society, were discussed at some length by Drs Hrdlička, Michelson, and Hough, and by Mr Dieserud.

At a meeting of the board of managers of the Anthropological Society, held March 23, 1911, the following resolutions submitted by the undersigned committee were adopted by the board and ordered published in *Science* and the *American Anthropologist*:

"Acting on the information furnished by one of its members, Dr Aleš Hrdlička, in regard to the wholesale destruction of antiquities in all parts of Peru, as well as in other regions of South America, the Anthropological Society of Washington has, after due consideration, resolved that:

"1. The remains of American aborigines, wherever met with and particularly in such countries as Peru, where native civilization reached high standards, are historical records of definite branches of the human family and, as such, are of great value to science, to the country in which they exist and to mankind in general.

"2. In view of such value of the remains in question, which include all manifestations of human activity, and also the associated skeletal parts of man himself, the destruction of these records is deprecated and the hope is expressed that scientific men and societies, as well as the proper authorities, will counteract the same as far as possible."

W. H. HOLMES,

A. HRDLIČKA,

WALTER HOUGH,

Committee

Meeting of March 28, 1911

The 453d regular meeting was held in the hall of the Public Library, March 28, 1911, with Mr George R. Stetson, vice-president of the society, in the chair.

Professor R. B. DIXON, of Harvard University, read a paper on *Polynesian Mythology*. After a geographical survey of the islands of the Pacific, including Polynesia, Melanesia, Micronesia, and Malaysia, the speaker gave a delineation of the pantheon and a concise exposition of the theology entertained, with greater or lesser variations, by the different tribes of these islands. The gods are broadly divided into greater and lesser. In addition to these there are ancestral and totemic deities. The four great gods are: Tane (dialectically, Kane), Tu (Ku), Tangaroa (Tanaloa), and Rongo (Lono, also Oro). The lesser gods are for the most part considered as their offspring. Of the four great gods Tane is the greatest. He is conceived as self-evolved, existing from

eternity, the father of men, and is connected with the sky. He is supreme in the Hawaiian Islands and New Zealand, although he had there no temples and scarcely received any worship, while in Samoa and central Polynesia at large he is almost unknown. The same is the case with Rongo, the god of agriculture, and Tu, the god of war. On the other hand, Tangaroa, who forms a group by himself, enjoyed great honor in Samoa and the central portion of Polynesia, but was associated with darkness and evil in Hawaii and seems to have been a late comer there imported from Tahiti or the Marquesas Islands. There are, as a rule, no images made of the great gods. The only representations made of them are stone pillars or wooden poles swathed in tappa or mats. The mythology of the other portions of the Pacific realm, such as Melanesia and Micronesia, agrees in some portions with that of Hawaii and New Zealand, in others with that of Samoa and central Polynesia.

The paper was discussed and commented upon by many of those present.

Meeting of April 18, 1911

The 454th regular meeting, which was also the annual meeting of the society, was held in the hall of the Public Library, April 18, 1911, with the president, Dr J. Walter Fewkes, in the chair. The following officers were elected for the ensuing year:

President—Mr F. W. Hodge.

Vice-president—Dr J. R. Swanton.

Secretary—Dr T. Michelson.

Treasurer—Mr J. N. B. Hewitt.

Additional Members of the Board of Managers—Messrs G. C. Maynard, G. R. Stetson, E. T. Williams, W. H. Babcock, and Dr E. L. Morgan.

It was voted to hold bi-weekly meetings at 4.45 P.M. on Tuesdays in the new National Museum instead of once a month at 8 P.M. as formerly, evening meetings to be held as the board of managers of the society shall determine.

Meeting of May 3, 1911

A special joint meeting of the Anthropological Society of Washington and the Medical Society of the District of Columbia was held at the New Masonic Temple on this date, with Dr Barton, president of the Medical Society, in the chair.

Drs Hrdlička and Lamb each read a paper and exhibited specimens illustrating the diseases of pre-Columbian inhabitants of the western

hemisphere. Dr Hrdlička's paper was based on his explorations in Peru. The speaker pointed out that among the skeletal material there was not a single instance of rachitis. There was one case which may have been tuberculosis of a vertebra, but the evidence was not absolutely conclusive and the age of the grave (at Chicama) was unknown. Two burials were encountered in which the bones were undeniably syphilitic, but both these graves were among the more recent and were probably post-Columbian. Thirty other long bones had more or less marked inflammatory alterations which might have been syphilitic, but the diagnosis could not be made with certainty. An examination of the many thousands of long bones showed that a very large majority of them had no lesions whatever. Only two of the 3,400 skulls brought away presented ulceration or a lesion that could be attributed with confidence to syphilis. In the Chicama cemeteries, and to a lesser extent in those of Pachacamac, there was marked rarity in the fractures of bones; and the setting in those that had been fractured was generally defective. Wounds of the skull, especially at Pachacamac, were very numerous. There was but one positive case of trephining, at Pachacamac; but there were several skulls in which it is impossible to say whether they are examples of partially healed wounds from clubs or scars from trephining.

Dr Lamb's paper was based on the pathological collections of the Army Medical Museum. The specimens numbered nearly 250 and show anomalies, diseases, or injuries. They come from the United States, Alaska, and Peru. Conditions such as the olecranon perforation, pilasteric femur, platyknicemic tibia, and deep channelling of some of the surfaces of the bones of the forearm and leg, were abundant, suggesting a primitive people or a people of low type. There are fractures, usually well healed but with deformity, among them two showing false joints. Many of the specimens present inflammation of the bone, hyperostosis, exostosis, osteomyelitis, osteitis deformans. Some showed bone syphilis, but none tuberculosis.

Both papers were discussed at length. Among the speakers were Drs Kober, LaGarde, Morgan, Carr, and Williams.

T. MICHELSON,
Secretary

BOOK REVIEWS

The Jews: A Study of Race and Environment. By MAURICE FISHBERG. New York: Charles Scribner's Sons, 1911. 12mo, pp. xix, 578.

The interesting volume at hand is "an attempt to present the result of anthropological, demographic, pathological, and sociological investigations of the Jews." The inquiries are founded on the measurements of about three thousand Jews in New York City, as well as on a collation of the literature on the different Jewish groups. The work is divided into a number of chapters which deal with: The physical characteristics of the Jews; Their types in various countries and the origin of these types; Proselytism and intermarriage among Jews; Demographic characteristics; Pathological matters; Social and economic conditions, education, occupation, criminality, political conditions, social peculiarities and their effects; and finally of assimilation of the Jews as contrasted with Zionism.

The book is quite a store-house of details on many of which it will be impossible to even touch in this review. It is remarkably free from bias. It is not as thorough and technical as might be desired by the professional scientist, particularly in history and in comparative anthropometric data, but is well adapted for the general intelligent reader. It contains much information which is not found presented together, or equally as well, in other sources, besides original data that are largely new.

Some of the principal points which the author brings out are, first, the fact, already fairly well known in anthropology, but little or not at all outside of that science, that the uniformity of social conditions of the Jews is not equal to and not co-existent with a homogeneity of physical type in the various groups of that people.

"Language, dress, deportment, manners, and customs, and even religion, are by no means sufficient to prove identity of origin, . . . and Renan's apt statement, '*Il n'y a pas un type juif, il y a des types juifs,*' is confirmed by a careful study of the somatic traits of the Jews in various countries, and often by the study of the Jews in a single country."

These physical differences are especially evident in the most important traits, such as the head form. "It is doubtful whether the most mixed of European nations, like the Italians or French, display any greater heterogeneity of cranial type than the Jews."

These differences are due, in the main, to incorporation, by conversion and clandestine or open unions, of other racial elements. "The cranial

type of the Jews in countries where they have lived for centuries coincides with the cranial types of the people around them. . . . Indeed, if the ancient Hebrews were long-headed as some are inclined to believe, then only those in countries where the non-Jewish population is of the same cranial type have remained unchanged in this regard; the bulk of the Jews in Europe have diverted from the original type, and are not at all of the race-type of the ancient Hebrews."

The only plausible explanation of the physical differences existing today among the Jews is that "by intermixture with their non-Jewish neighbors they have slowly acquired the cranial types prevalent in the countries in which they have lived for a long time."

The differences in stature, while in part possibly due to environment, are in the main also due to the same causes as the differences in the head form and in complexion, that is, to mixture with the racial elements among which the Jews live.

The apparent uniformity of the cast of countenance among the Jews is explained by a prolonged action of uniform social environment. It is a social and not an anthropological facial type. Under different conditions and with the discarding of peculiarities in dress, etc., coupled with an assumption of personal habits of the people among whom they live, this facial type, as well seen in this country, changes rapidly, becoming less and less recognizable.

On the whole, "there is no more justification for speaking of ethnic unity among the modern Jews, or of any *Jewish Race*, than there is justification to speak of ethnic unity of the Christians or Mohammedans, or of a Unitarian, Presbyterian, or Methodist race."

Among other of the more important admixtures among the Jews, the author recognizes the Negroid one, which, in the reviewer's opinion, is a fact that has hitherto not received due attention.

There are numerous interesting data on the increasing inter-marriages of Jews with people of other faith, on the increase and decrease of Jews in different countries, on their vitality, low mortality, especially from tuberculosis, and on other conditions of medical and sociological interest, for which the reader must be referred to the original. The so-called "tenacity of life," of the Jew is shown to be the result of his habits and "can equally be achieved by people of any race by adopting their mode of life." Their small liability to consumption is remarkable, but evidence, particularly in the United States, shows that it is not a racial trait.

As to the future of the Jews as such, the author expresses no great hope. Wherever state laws restricting their liberties and particularly

their inter-marriage with non-Jews are rescinded, the Jews give up their exclusive characteristics and mix with the other whites. The presence and enforcement of such laws is "more instrumental in maintaining Judaism than all the Rabbis in the world."

On the whole, the work in hand must be regarded as a well written and serviceable contribution to the subject with which it deals. It is particularly welcome as coming from one who is a Jew himself. It will, of course, scarcely be received with favor by the orthodox of that religion, for it weakens the artificial barrier between the Jew and his neighbours.

A. HRDLIČKA.

The Prehistoric Period in South Africa. By J. P. JOHNSON. London: Longmans, Green and Co., 1910. 89 pp., 6 pls., 47 figs.

Believing that geological and archeological research has established a definite sequence in the primitive cultures of the Old World, the author has used the one generally accepted for Europe as a basis for his classification of South African antiquities. In the introduction he emphasizes the importance of the data afforded by river terraces, citing as an example, southern England, where a single section reveals the stratigraphic relationship of the main divisions of the entire stone age—eolithic, paleolithic, and neolithic.

A chapter is devoted to eoliths from the Leijfontein farm, below Campbell Rand, near Campbell village, where patches of very old gravel, having no connection with any existing river, occur at the foot of the escarpment. Mixed with the gravel are much worn and highly glazed eoliths, a few of which are shaped from artificially produced splinters or flakes.

As to paleoliths, the author is of the opinion that those of the Acheulian type are distributed throughout the whole of South Africa, he himself having found them in the valleys of the Zambesi, the Elands-Rustenberg, the Magalakwin, the Selati, the Olifants, the Komati, the Vaal, the Caledon, the Orange, and the Zwartkops, at Algoa Bay.

Solutrean (paleolithic) sites are also widely distributed over South Africa, the Solutrean industry being distinctly more recent than the Acheulian; and, as is also the case in Europe, characterized by a pronounced development of the artistic faculty. South African petroglyphs and rock-paintings of Solutrean age are distributed over the whole area in question. The pecked or incised figures are mostly found on boulder-like outcrops of rock, either among kopjes or in the open field, while the frescoes are chiefly met with at the back of rock-shelters. Some of these

bear a remarkable resemblance to paleolithic frescoes recently found by Breuil near Cogul (Catalonia), Spain. The objects represented are for the most part animals and men, generally in silhouette only. Geometric figures are abundant. The petroglyphs are disconnected units only, and usually larger than the paintings; the latter frequently depict a scene, as, for example, a hunt or a fight.

The petroglyphs are mostly peckings ranging from crude outlines to veritable bas-reliefs. The most primitive series of petroglyphs are those discovered by Leslie in the neighborhood of Vereeniging. The principal animals illustrated are the eland, giraffe, rhinoceros, and elephant. Although the pecking is very irregular, the general effect produced is good. All the groups appear to be of the same age and are weathered to the same color as the rest of the rock surface. At Biesjesfontein, some thirty kilometers southwest of the village of Koffyfontein, some of the figures are scraped instead of pecked on the rock. Here also are found two engravings; one of a hippotragus, the other of a quagga.

In a vast majority of rock-paintings the outline is filled in with a uniform tint, either red or black, red predominating. In eastern Orangia and in the region south of the Orange River, polychrome paintings occur. The eland, a great favorite with the Solutreans, is depicted in two or more colors, white ventrally and golden yellow, red, or dark brown dorsally. Some of the better polychrome examples "show distinct, though incipient, shading." The figures of animals often show real merit; those of men are always grotesque.

The final chapter deals with the prehistoric Bantu, abundant proofs of whose activities are to be found throughout the now sparsely inhabited bush country of northeastern South Africa. The Steynsdorp valley, for instance, is everywhere dotted "with remains of old kraals," in and about which are mortars, pestles, rubbing stones, and other artifacts. Evidences of soil tilling are many; also of mining and smelting operations in iron, copper, tin, and gold.

The finest ruins occur between the Limpopo and the Zambesi. Of the smaller, more primitive ruins, the Inyanga fort is a good example. It is the prototype of the more imposing Zimbabwe type. The ruins are on commanding sites, taking their shape from the summit contours; the walls were built of roughly rectangular blocks of granite laid in even courses. The best walls are solid throughout; many are merely faced with stone, the space between the faces being filled with rubble. No cement was placed between the blocks. The builders knew how to produce chessboard, cord, herring bone, and chevron patterns. Courses of

rock of a different color were also frequently inserted. Monoliths were placed upright on the walls of some of the buildings. At Zimbabwe which was the "fortified kraal of the head chief," additional pillars of soapstone occur, "carved at the top to represent perched birds of prey." All these ruins are the work of a Bantu race that reached a more advanced culture stage than their descendants. The objects found in the ruins are characteristically Bantu.

The present work is the fourth on South Africa by the same author, three of which are archeological. His right therefore to be classed as an authority in this field can hardly be questioned.

GEORGE GRANT MACCURDY.

Geslachts—en Persoonsnamen der Peigans. Bijdrage van den Heer C. C. UHLENBECK. Overgedrukt uit de Verslagen en Mededeelingen der Koninklijke Akademie van Wetenschappen. Afdeeling *Letterkunde*, 4e Reeks, Deel, XI. Amsterdam, Johannes Müller, 1911. 9¼ X 6, pp. 26.

The author, who spent some time with the Piegan of Montana and has already published a collection of Blackfoot texts with English translations, here records his observations on the band and personal names of the Southern Piegan.

Having had occasion on his trip west to come into contact with some Tuscarora Indians, Prof. Uhlenbeck is impressed with the differences between the social organization of this tribe and that of the Blackfoot. While he believes in the exogamy of the Piegan "clans" he finds among them both paternal descent and absence of totemic clan names. Only in anomalous cases—where a Piegan woman has married a white man or an Indian of another tribe—is descent traced through the mother. However, Prof. Uhlenbeck did not by any means find that the relatives on the mother's side are disregarded. In fact, sexual relations with both paternal and maternal relatives are held in abomination (*gruwel*). This seems to indicate that the "clan" exogamy is in reality a feature derived from the rule against marriage with blood relatives, as Wissler has contended. The author would have us believe that the clan of "Fat-Melters" forms an exception to the exogamous rule, that the members marry freely among themselves and are accordingly regarded as shameless by the other clans. Further, they do not hesitate to indulge in ribaldry in the presence of female blood relatives.

In the first principal division of his paper, Prof. Uhlenbeck records the origin traditions of nineteen of the Piegan clans, whose number he sets at approximately thirty. The data here presented coincide essen-

tially with the corresponding material previously published by him (*Original Blackfoot Texts*, pp. 1-4). Prof. Uhlenbeck rightly insists on the nickname character of all the designations. In particular, he is to be complimented on refusing to accept such names as "Skunks" or "Pelicans," of which there are several, as indications of a totemic system comparable with that of the Iroquois. On the other hand, it is not quite clear to the reviewer what significance Prof. Uhlenbeck attaches to the traditions of the Piegan. His impression is that the author ascribes rather more historical value to the legends than they deserve; in reality, they may be nothing but naively rationalistic re-interpretations of band names. In this connection a very important question is raised by Uhlenbeck. May not all the clan names of the Piegan be of relatively recent origin, may they not have been grafted on a system of exogamous clans which formerly bore names of quite a different character? Without solving the problem, Prof. Uhlenbeck points to the enormous changes in Blackfoot life which have been brought about by the acquisition of the horse. While, however, it would be rash to deny either the far-reaching influence of the last-named factor or the recent origin of many of the Piegan clan names, it does not follow in the least that the system of naming clans prior to the introduction of the horse differed from that now in vogue. Prof. Uhlenbeck does not indeed commit himself to this theory, but he ought to have mentioned and taken into account the well-established fact that nicknames of bands or clans are not confined to the Blackfoot, but are rather widely distributed in the Plains area. Thus, the designations of the Crow clans, which are strictly exogamous, are all nicknames of the Piegan type. Nevertheless, it may at some time be definitely demonstrated that Prof. Uhlenbeck's feeling is right so far as the most general aspects of the question are concerned; that is to say, it may at some future time be possible to show that the *system* of exogamous clans, so far as such an institution exists among the Plains tribes, and the system of giving nicknames to social or local divisions are of independent origin. Only there is no psychological reason for assuming the greater antiquity of the exogamous system; as already suggested, the present nicknames may be recent, while the system of giving nicknames may be of great age.

The second part of the paper is devoted to personal names. Three methods of getting a name for a child are distinguished: the father secures the services either of a noted warrior, or of a medicine man, or of an old woman. The warrior names the child, whether boy or girl, according to one of his brave deeds; the medicine man according to a vision; the old

woman according to sounds heard along a river bank. Of these methods, the first seems to be the most common. One of the Piegan chiefs has given names to a considerable number both of his own descendants and those of other men, because of his splendid martial career. While a girl generally keeps the name given during her entire lifetime, a young man may acquire new names when he has distinguished himself by some manly deed.

In some cases, a name given in mockery was formerly adopted by the person nicknamed,—but only after he had vindicated his honor by a creditable exploit against the enemy. This was the only way to wipe out the ignominy of the nickname, irrespective of whether the latter was a reproach for cowardice or for some other delinquency.

Leaving the names of individuals, Prof. Uhlenbeck makes a brief reference to those of the painted lodges still found among the Piegan. As most of these names are taken from animals and as the lodges are often inherited from father to son, some might suspect totemic institutions here. The author explains, however, that the painted lodges may freely change their ownership, passing out of a family or even a clan, and that there is no belief in descent from the animal. According to the native traditions an animal or other supernatural being once gave to some Piegan each of the painted lodges, ownership of which involved certain ritualistic performances. There is thus connected with the sacred lodges a form of animal worship, but not totemism as conceived by the author.

An appendix gives concrete data with regard to the personal names and band affiliations of three of Uhlenbeck's informants, as well as of some of their kin.

As the foregoing notice indicates, Prof. Uhlenbeck's paper adds some welcome details to our knowledge of Blackfoot ethnology. The author shows great familiarity with Blackfoot literature, but is apparently not very well acquainted with that of other Northern Plains tribes. Accordingly, he does not always see the Piegan facts in the proper ethnographic perspective, as appears most clearly from his remarks on nicknames and exogamy. This deficiency will, it may be hoped, be remedied as he continues to publish the results of his investigations.

ROBERT H. LOWIE.

Original Blackfoot Texts. By C. C. UHLENBECK. Ver. d. Kon. Akad. van Wetenschappen te Amsterdam, Afd. Lett., n. r. d. XII, No. 1 (1911).

This pamphlet begins with an account of the author's informants, etc. Next follows (pp. vi-x) a description of the phonetic system em-

ployed. Then come sixty-six pages of texts with English translations, arranged in two columns, paragraph corresponding to paragraph. A few pages of songs with introductions and English translations follow. An appendix gives the genealogy, history, and cosmogony of Bear-chief. Pages 94-96 contain the *addenda et corrigenda*. A good English index (pp. 97-106) completes the whole.

This essay has largely increased our knowledge of Piegan mythology, and is a good supplement to Wissler and Duvall's work; and Professor Uhlenbeck deserves credit for his performance. The English is exceptionally good for a foreigner. Of course there are a few slips of idiom and punctuation; but they are quite insignificant. It may be in place to note that Joseph Tatsey (Professor Uhlenbeck's interpreter and chief informant) is known as a thoroughly competent interpreter, the equal to or superior of Duvall.

It remains to go into technical details. On p. vii we read: "There are many vacillations in the sounding of the language—and I have thought it better to express these vacillations in my way of spelling, than to efface them by an arbitrary uniform orthography." I strongly suspect this 'vacillation' is one of hearing rather than of the language. Another point is that it seems to me that Professor Uhlenbeck has done the reverse of leaving these 'vacillations' graphically expressed. Take the case of intervocalic consonants. He says (p. vi): "In Blackfoot a consonant in the body of a word often belongs both to the preceding and following syllable and then we might write it double as well as single. Only rarely I express this gemination in writing, because in most cases it is not constant. Where it is very emphatic, as in some cases with *mm*, *nn*, *ss*, I write doubles." Regarding the alleged inconstancy I have expressed myself above; but if it be a true linguistic phenomenon, then by all means it should be recorded; if due to defective hearing, the inconstancy should remain in order to enable the reader to check the author's phonetics. And how is any one unacquainted with the language—and Professor Uhlenbeck's pamphlet presumably is designed for such—to know whether any given intervocalic consonant is double or single? A concrete example will illustrate the point. Take *sta'mitapo* he went to 14.27. Should this be pronounced *sta'mmittap̣po*, *sta'mmittapo*, *sta'mmitap̣po*, *sta'mittapo*, *sta'mitapo*, or *sta'mmitapo*? As a matter of fact none of the above is correct; the word is *sta'mmitap̣ḍw̄*^a: see below.

The same point is to be made with regard to the non-indication of the glottal stop: "Glottal stop. I write it only in a few cases, though it is very often heard in the language" (p. x). Pray how then is any one

unacquainted with the language for whom, as I said above, the pamphlet is presumably written, to know how to pronounce any given word? On p. vii we learn that the sound always occurs initially before vowels (which I doubt), and for this reason in this position he has not indicated it graphically. This is not objectionable, for one has definite instruction on its use in such position. But what about its use or non-use in other positions? The following may be quoted: "A common sound in Black-foot is the glottal stop, which may be expressed by the Greek sign for the spiritus lenis. I only write it in a few words, where it is always to be observed" (p. vii). Whether the inconstancy is due to inaccurate hearing or is truly linguistic in origin, all such cases of inconstancy should be recorded with the hope of ultimately elucidating the phenomenon. Not to do so appears to me to fly in the teeth of the principles Professor Uhlenbeck has enunciated on p. vii.

In the case of *ā* (p. vii), Professor Uhlenbeck says: "It is usually a contraction of the diphthong *ai* (*āi*). In these texts I have always written *ai*, though perhaps it would have been better to write sometimes *ā*, and sometimes *ai*, according to the pronunciation of the moment." Here Professor Uhlenbeck hits the mark: it would have been better for those who have no knowledge of the language; and it would have furnished the means of gauging his accuracy in hearing. The same remarks made above apply with equal force here.

According to Professor Uhlenbeck *χ'* occurs only after *i*. That is a point on which we differ: I have heard *χ* (his *χ'*) in many cases when not after *i*.

We are told (p. viii) that the Piegans often waver between *a* and *α*. I agree that they seem to, but think it is the fault of our hearing, though it may be due to some undiscovered phonetic law or laws. The same apparent fluctuation occurs in Cheyenne, Menominee, Micmac, Malecite, Penobscot, Fox, Sauk, and Kickapoo.

Doubtless induced by a laudable desire to avoid the use of diacritical marks, Professor Uhlenbeck has not employed the makron; but has given directions as to quantity, p. vi. I quite agree that accented vowels are longer than unaccented ones. According to Professor Uhlenbeck there are only a few constant long vowels. All such should be carefully marked as such, and where apparently not constant, the vowels under question should be designated as long and short; though if the makron were consistently used for longs, the brevis could be omitted. I am glad to confirm the statement that a vowel even if accented is short before *mm* and *nn*. I am not positive that it is before *χ* (*χ*).

Whether *kyáio* or *kyáiyō* be written is merely a matter of taste as long as we are told that the latter phonetically is more proper.

The most serious defect in Professor Uhlenbeck's phonetics is the non-recording of final whispered vowels. Occasionally he has heard them as full sounding; or possibly they were rhetorically lengthened in the cases in which he has heard them: if Professor Uhlenbeck had consistently used the makron this point could be determined. Examples of these are: *amóma* (60.11) this; *nápiwa* (36.17; 39.13, 26; 63.11) old man; *matápiua* (65.7) people; *kanáitsitapíua* (67.28, 29) all Indians; *mata'keua* (65.13) another woman; *ake'ua* (6.11; 14.6, 29; 56.18, 27) woman; *kipitákeua* (37.10) old woman; *kanáitapíua* (13.11,¹ 19.21) all the people; *aka'itapíua* (57.1) the ancient people; *na'tsitapíua* (13.13) two persons; *einíua* (13.25, 15.21, 21.11) buffaloes.

But we find variants of most of these without the final *a*, and even on the same pages as the forms with *a*: *nápiu* (35.2, 9, 25; 37.14; 39.5, 10; 40.2, 4); *amom* (44.19), *matápiu* (44.20), *akéu* (5.13, 6.20; 14.1, 16; 50.2; 54.3), *kipitákeu* (37.16; 51.9, 20, 31; 62.3). In the recording of personal names and the names of peoples Professor Uhlenbeck is nearly consistent in writing final *a* when the word ends in *ua*. There are other scattered instances in which the final whispered vowels are recorded as full sounding; but there are dozens of cases where final whispered vowels are not recorded in any way. It is difficult to understand how Professor Uhlenbeck failed to hear them as Wissler-Duvall in their works on the Blackfoot have properly indicated them. Professor Uhlenbeck might say that Tims does not record them (in reality a few are recorded as full sounding). It is not to be expected that missionaries should make such fine phonetic distinctions. Baraga does not record final whispered vowels in Chippewa; he does record some as full sounding; but whispered vowels exist, at least in the dialect of the Mississippi band at White Earth, Minn. For example *kiwábamag* really is *kiwā'bamāg*ⁱ THOU SEEST THEM (an.). The case is more serious when the word ends in *o*; here in verbs the pronominal ending *-w^a* is left out. An example is *sta'mitoto* he then went to (41.21) which I would write *sta'mmitōtōw^a* (the first *ō* is slightly shorter than the second). *Sta'mistapō* (51.1) then he went, *iχ'tapo'* he went that way 51.2, *itsito'to* (51.3) he came to, *sta'mitapo* (14.27) he went, are other examples. Final *-w^a* after *ō* is far more difficult to hear than when after *i*; at times it is nearly inaudible, the movements of the lips alone betraying its existence. Very fortunately final whispered vowels are not as common as in Fox,—at least I have not recorded so many. On a future

¹Secondary accent omitted.

occasion I hope to determine whether they really exist after *s* and stops: I find I have been inconsistent in such cases.

From my remarks on the phonetics, it will be seen that these texts do not come up to the standard set by Boas, Sapir, Jones, Goddard, and others. Yet considering his brief stay with the Piegans (three months), and that this was his first experience with any spoken American Indian language, Professor Uhlenbeck has accomplished much,—more than could have been expected under the circumstances.

TRUMAN MICHELSON.

Some Technological Notes from the Pomeroon District, British Guiana. By DR WALTER E. ROTH. Part II, Journal of the Royal Anthropological Institute of Great Britain and Ireland, XL, January-June, 1910, with 14 plates.

These papers on aboriginal technic by Dr Roth are models which one wishes students of material culture might emulate. The results attained are in the truest sense original contributions to knowledge corresponding to the characterization of exact science. Unlike specific characters, the arts and industries of mankind change rapidly or disappear at once with contact of a higher civilization and usually the ripe time for their study passes unnoticed. Dr Roth has preserved a record of the manufacture of cotton and other fiber twines and the cords and hammocks into the composition of which they chiefly enter among the Caribs, Warrau, and Arawak, of the Pomeroon District, illustrating every detail with clear and adequate pen drawings of his own.

WALTER HOUGH.

Die Australischen Bumerangs im Städtischen Völkermuseum. Von FRANCIS C. A. SARG. Frankfurt am Main: Joseph Baer & Co., 1911. 4to. Pp. 40, 59 figs.

This paper of Mr Sarg represents a most conscientious study of the large collection of Australian throwing weapons of the boomerang series possessed by the Städtischen Völkermuseum of Frankfurt am Main. This collection, which has been gathering for over 55 years, now contains perhaps the fullest exposition of the boomerang in any museum and it is fortunate that Mr Sarg was able to take up the subject so fully equipped with material and that he has rounded out the work with a knowledge of the bibliography of the boomerang. Mr Sarg divides the series into return or play boomerangs, not returning or war boomerangs, with intermediate forms (Kaile) for both play and war. The war class is divided into hurling and slashing and only slashing, these in turn being

normal or abnormal, modified at the point like the Lil-Lil and hook boomerang; and the slashing type modified at the grip—the knob boomerang and wooden sword.

The plates showing the progressive variations of the types are very interesting, the descriptions are clear and full, and the presentation and discussion of the decoration of the specimens is a valuable contribution.

WALTER HOUGH.

El Hueso Parietal bajo la influencia de la deformación fronto-occipital; contribución al estudio somático de los antiguos Calchaquíes. (The Parietal Bone under the influence of the fronto-occipital deformation; contribution to the somatological study of the ancient Calchaqui). By J. A. DILLENIUS. Facultad de Filosofía y Letras, Publicaciones de la Sección Antropológica, No. 7. Buenos Aires, 1910. 11 X 7½, pp. 96, 14 plates, 21 text figures.

When I read for the first time in the *Sumarios de las Conferencias y Memorias presentadas al XVII Congreso internacional de las Americanistas* (Resumen No. 1, *La verdadera forma del craneo calchaqui deformado*) that Miss Juliane A. Dillenius, a pupil of Professor Lehmann-Nitsche, had come to the conclusion that the true, original headform of the Calchaqui must have been dolichocephalic, I was very much astonished. But I was not the only one, as I learned afterwards. Miss Dillenius' remarkable statement was a surprise indeed to several members of the Congress. Professor Ed. Seler, in his brief report on the Congress—which, by the way, contains several inaccuracies—speaks even of "ein gewisses Aufsehen" (*Zeitschr. f. Ethnologie*, 43, Jahrg., 1911, p. 118). Still, the history of science teaches us that many extraordinary, startling assertions, which at first nobody could believe, proved ultimately true. And so I waited to form a definite opinion on the subject until I should have read Miss Dillenius' final memoir. This I have done, but I would not undertake to write a review of it, if one of the editors of the *American Anthropologist* had not requested me, for criticising is often, in some respects, an ungrateful task indeed.

An elaborate study, of 96 large octavo pages, like *El Hueso Parietal* does not lend itself to a minute analysis in a brief space. Besides fourteen excellent plates, representing Calchaqui skulls, this memoir contains thousands of craniometrical cyphers, arranged on numerous tables, various diagrams, and other interesting figures. All these can not, of course, be commented on separately in this review. Let it suffice to give a general idea of the purport of Miss Dillenius' work.

It is difficult to imagine what originally can have induced Miss

Dillenius to undertake this extraordinary investigation. No physical anthropologist, I think, would ever have supposed that the artificially deformed, hyper- and ultra-brachycephalic Calchaqui were primitively dolichocephalic, unless influenced by some preconceived idea. The work of Father Damasus Aigner (*Ueber die Ossa parietalia des Menschen*, Munich, 1900) must have inspired Miss Dillenius, for under its influence her work was done. At any rate, she followed Aigner's method. Aigner invented a system of measurements to find out the difference which exists between the parietal bone of men and the anthropoids, as well as the difference between the parietal bone of dolichocephalic and brachycephalic skulls. This method enables one to know "with exactness all the existing ratios between the different elements of the parietal bone" (Dillenius, op. cit., p. ii). It consists of linear measurements and various angular measurements, which latter are partly taken with a little instrument (op. cit., p. 40, pl. VIII).

One hundred adult Calchaqui skulls were taken for examination from a series of 250, collected at Poma, Fuerte Alto, and La Paya, in the ancient Calchaqui country. Among these 250, only 3 skulls are undeformed. The series studied is on the whole ultra-brachycephalic, oscillating between 92 and 115.6. All these skulls belong to the Museum of the Faculty of Philosophy and Letters in Buenos Aires, of which Professor Ambrosetti is the director.

In Miss Dillenius' opinion all, or nearly all, the various deformations which she, and I myself, found on Calchaqui skulls, are subforms of the fronto-occipital deformation (p. 7), but she brings no proof whatever for this assertion. Her "*à nuestro juicio*" is not sufficient to convince one.

The people, or group of tribes, which we are used to call Calchaqui, or better Diaguitas, as Boman suggested, were, somatologically speaking, decidedly a very mixed lot. Virchow and those few, including myself, who have studied their osseous remains, have found several types among them, not only deformed, but normal. The latter and the but slightly, accidentally deformed skulls in the La Plata Museum formed about 40 per cent of the collection I studied there in 1896. Among these 40 per cent I distinguished not less than six types, but *only one* was a true dolichocephal (index 72.4), two were mesati- or mesocephalic, while all the others were brachycephalic in different degrees. And amongst all these non-deformed skulls *there was not a single one which could be classed as Palaeo-American*, in the sense employed by Miss Dillenius.¹ Dr Rivet has shown in his valuable memoir

¹After *her own* terminology, as Lehmann-Nitsche writes me, "*ohne dass hier an Deniker gedacht worden wäre.*" This makes the question still more confused.

on the Lagoa Santa-race in Ecuador (*Bull. et Mém. Soc. d' Anthr. Paris*, V^e série, t. IX, pp. 251, 252) that the Calchaqui skull to which I at first attributed somewhat Palaeo-American characteristics, belongs to a different type. The same applies to a certain Araucanian skull, with which I compared it. Virchow, who described also a dolichocephalic skull from Tinogasta, said that this skull could never have belonged to the same race as the hypsi-brachycephalics of Barranca (Cf. my *Anthropologie des anciens habitants de la région Calchaquie*, pp. 32, 39, 59). Miss Dillenius does not say explicitly to which type the three skulls of her series, which had to be left out ("que debieron quedar fuera de concurso"), belong, but as two of them presented a slight flattening at the lambda, and it could not be made out whether the third was deformed or normal (p. 8), we may conclude that these three skulls were by no means typical Palaeo-Americans. It is obvious then that when we do not find any hypsi-dolichocephalic skulls among the non-deformed Calchaqui, the allegation of Miss Dillenius that the Calchaqui Indians were originally of the Palaeo-American type is valueless. Moreover, as long as we do not know in how far the other bones of the skull, besides the *os parietale*, are affected by artificial deformation, an absolute proof of what Miss Dillenius holds to be true can not be given. All the direct measurements and angles of this one bone after Father Aigner's method, however accurate it may be in itself, can not dispel my doubts. And finally, if Miss Dillenius had made a comparative study of the other skeletal remains (long bones, pelvis, etc.) also, and had found her hypothesis about the primitive skull-form confirmed, this would have lent a greater degree of probability to it. The "pues" and "irrecusablemente" with which Miss Dillenius emphasizes her final conclusion (pp. 87-89) are as little convincing as the preceding chapters.

Regardless of the main purport of Miss Dillenius' work the chapter on the configuration of the *lineae temporales* and the coronal suture at the *stephanion* (pp. 71-81) is very interesting and, in my opinion, the most valuable part of the whole memoir. Miss Dillenius has proved and demonstrated by several figures that the said region of the deformed skulls shows a peculiar anatomical characteristic which until now was found only among apes. It is due, she holds, to the artificial head deformation and she calls it, as suggested by Lehmann-Nitsche, a *pseudo-pithecoïd* characteristic. It is not congenital, but acquired, and belongs to "a primitive condition of man, in the sense of his ontogenetic evolution, and is a typical characteristic of the anthropoid apes."

The time and labor bestowed on *El Hueso Parietal* must have

been considerable. It is therefore the more to be regretted Miss Dillenius did not choose another subject of investigation on which she could have proven her patience and skill. American physical anthropology abounds in interesting problems, the solution of which would have benefited science much more than the seeking for a chimerical "true" primitive headform. In this connection I would quote the opinion of Virchow: "Die Ermittlung der natürlichen Schädelform der Eingeborenen ist in keinem Welttheil mit so grossen Schwierigkeiten verknüpft, als in Amerika" (*Crania Americana*, p. 5). Thus the ground Miss Dillenius chose, or was suggested to tread on, is a slippery one indeed, with very few landmarks. Where many an old traveler in the fields of anthropology might have stumbled or lost his way, we can hardly blame a newcomer with but little experience if a similar fate befalls him.

H. TEN KATE.

Cat's Cradles from Many Lands. By KATHLEEN HADDON. London & New York: Longmans, Green & Co., 1911. $7\frac{1}{2} \times 5\frac{1}{4}$, pp. xvi, 95; 59 ills.

Miss Haddon has been introduced into the subject of the forms of play of primitive people under the eminent guidance of her father. She gives us in the present volume a useful collection of string figures, collected from a variety of sources. She applies the common terminology devised by Dr Haddon. Her book and that of Mr Jayne are valuable sources for a form of play that has attracted the attention of students, and is perhaps better known than any other games of primitive people.

FRANZ BOAS.

SOME NEW PUBLICATIONS

ANDREĖEV, M. S. *et* POLOVCOV, A. A. Matériaux pour servir à l'Ethnographie des Peuples Iraniens de l'Asie Centrale. (Publications du Musée d'Anthropologie et d'Ethnographie de l'Académie Impériale des Sciences de St.-Petersbourg.) *Iškašim et Vakhan*. St. Petersburg, 1911. 12×8¼, pp. 41, plates 6. Text in Russian.

AVEBURY, Right Hon. Lord [Sir JOHN LUBBOCK]. Marriage, Totemism and Religion, an Answer to Critics. London, New York, etc.: Longmans, Green & Co., 1911. 8×5, pp. viii, 243. (Price \$1.25, net.)

CURTIS, EDWARD S. The North American Indian. Being a series of volumes picturing and describing the Indians of the United States and Alaska. [New York:] 1911. Vol. VI, pp. ix, 193; vol. VII, pp. xii, 210; vol. VIII, pp. ix, 227, all containing many illustrations. Also three portfolios of plates, one accompanying each of the three volumes of text above noted.

DENSMORE, FRANCES. Chippewa Music. (Bulletin 45, Bureau of American Ethnology.) Washington: Government Printing Office, 1910. 9×5¾, pp. 216, plates 12, text figures 8.

FEWKES, JESSE WALTER. Preliminary Report on a Visit to the Navaho National Monument, Arizona. (Bulletin 50, Bureau of American Ethnology.) Washington: Government Printing Office, 1911. 9×5¾, pp. 35, plates 22, text figures 3.

———. Antiquities of the Mesa Verde National Park; Cliff Palace. (Bulletin 51, Bureau of American Ethnology.) Washington: Government Printing Office, 1911. 9×5¾, pp. 82, plates 35, text figures 4.

MALER, TEOBERT. Explorations in the Department of Peten, Guatemala: Tikal. (Memoirs of the Peabody Museum of American Archaeology and Ethnology, Harvard University, vol. v, no. 1.) Cambridge: Published by the Museum, 1911. 14×11, pp. 1-92, plates 1-28, text figures 1-17.

OVINGTON, M. W., with a foreword by Dr FRANZ BOAS. Half a Man, the Status of the Negro in New York. New York, 1911. 7½×5½, pp. ix, 236.

SERGI, G. L'Uomo. Milano, 1911. 9½×6¼, pp. xv, 421, figures in text 212, plates 107, map.

SPECK, FRANK G. Ceremonial Songs of the Creek and Yuchi Indians, with Music Transcribed by Jacob D. Sapir. (University of Pennsylvania Museum Anthropological Publications, vol. 1, no. 2.) Philadelphia: Published by the University Museum, 1911. 10¾×7¾, pp. 155-245, figs. 4, frontispiece.

STARR, FREDERICK. Lolo Objects in the Public Museum, Milwaukee.

(Bulletin of the Public Museum of the City of Milwaukee, vol. 1, part 2, July, 1911.) 9×6, pp. 209-220, plates 8.

SWANTON, JOHN R. Indian Tribes of the Lower Mississippi Valley and Adjacent Coast of the Gulf of Mexico. (Bulletin 43, Bureau of American Ethnology.) Washington: Government Printing Office, 1911. 9×5¾, pp. 387, plates 32, text figures 2.

THOMAS, CYRUS; assisted by J. R. SWANTON. Indian Languages of Mexico and Central America and their Geographical Distribution. (Bulletin 44, Bureau of American Ethnology.) Washington: Government Printing Office, 1911. 9×5¾, pp. vii, 108, map.

THURNWALD, RICHARD. Stufen der Staatsbildung bei den Urzeitvölkern (auf Grund von Forschungen bei den Melanesischen Stämmen der Südsee). (Zeitschrift für vergleichende Rechtswissenschaft, xxv Band, 2/3 Heft.) Stuttgart: Ferdinand Enke, [1911]. 8½×5½, pp. 417-432.

TOZZER, ALFRED M. Preliminary Study of the Ruins of Tikal, Guatemala. (Memoirs of the Peabody Museum of American Archaeology and Ethnology, Harvard University.) Cambridge: Published by the Museum, 1911. 14×11, pp. 93-135, plates 29-30, text figures 18-47.

VOLK, ERNEST. The Archaeology of the Delaware Valley. (Papers of the Peabody Museum of American Archaeology and Ethnology, vol. v.) Cambridge: Published by the Museum, 1911. 9½×6½, pp. 258, plates 125, text illustrations 26, maps 2.

WRIGHT, G. F. The Ice Age in North America. Oberlin, Ohio, 1911. 9×6¼, pp. xxi, 763, plates 9, text figures 196.

ANTHROPOLOGIC MISCELLANEA

Annual Meeting of the American Anthropological Association.—

The next annual meeting of the American Anthropological Association will be held in Washington, D. C., Dec. 27-30, in affiliation with the American Folk-Lore Society and Section H of the American Association for the Advancement of Science.

Kalamazoo.—A contraction of an Indian phrase descriptive of the stones seen through the water in its bed, and which, from a refractive power in the current, resemble otters swimming beneath the surface. Such is the explanation, and the only one, as far as I know, that has been given, of the meaning of the word Kalamazoo; and the author of this remained unknown to me until a short time ago, when I accidentally discovered that it was H. R. Schoolcraft, who gave it, along with some other specimens of his etymological absurdities, in his *Narrative of an Exploratory Expedition, in 1820, to the Sources of the Mississippi River*. The author remarks that the original term, which he writes *Negikanamazoo*, "has its root-forms in *negik*, an otter, *kana*, to hide, and *ozoo*, a quadruped's tail," and adds that "the letter *l* is a mere transposition of *n* in native words passing from Indian to the Indo-French language." Now, provided that such were really the elements of the word under consideration, the first two members would mean 'the otter conceals him (or her),' since *kâna* is the third person singular of an animate transitive verb; the following consonant, *m*, which Schoolcraft forgets to mention, would be meaningless; and the fourth element, *ozoo*, would stand for *osow*, meaning 'his tail,' a word which cannot be used in composition.

The fact is that the alleged word *negikanamazoo* given by Schoolcraft is a deliberate alteration by him of *kikalamazo*, written by the French at a period when some dialect of Ojibwe, to which the word belongs, was still using the letter *l*.¹ It is a slight (very slight) alteration of old Ojibwe *kikalâmozo*, meaning 'he is inconvenienced by smoke in his lodge'; from the root *kik*, 'to be stupefied,' 'incommoded,' 'inconvenienced,' etc., and the animate verbal adjective termination *-alâmozo* (of which the inanimate form is *alâmate*) relating to the effect of smoke, and the final syllable *-zo* (and inanimate *-te*) of which denotes the action of fire. The

¹There is a vocabulary of such an Ojibwe dialect in Carver's Travels.

name evidently alludes to some person, long ago forgotten, who was probably prominent in his time and was possibly noted for his hospitality, and in whose lodge a fire was ever smouldering and ready to be at once quickened in order to provide chance callers with a warm meal. But this is mere speculation. It is always very much easier to give the meaning of an Indian personal name than it is to explain its *raison d'être*.

W. R. GERARD.

Note on the Gentes of the Ottawa.—As Morgan declares the names of the Ottawa gentes are unknown, and Chauvignerie mentions only the Bear, Otter, Gray Squirrel, and Black Squirrel (see Handbook of American Indians, article Ottawa), I think it desirable to publish the following list of Ottawa gentes which I found among Dr Gatschet's papers: Ami'k tutām, Beaver clan; Makwa' tutām, Black Bear clan; Atchitchak tutām, Crane clan; Ma-inga'n tutām, Wolf clan (respected); Ningi'k tutām, Otter clan; Hāshashkū' tutām, Muskrat clan; Namä' tutām, Sturgeon clan; Poshī-ū' tutām, Wildcat clan; Mishi bishi' tutām, Panther clan (respected); Mishāwā tutām, Elk clan; Mēshikā' tutām, Turtle clan; Ki'shiki ki'sis tutām, Daylight Sun clan (of highest reputation); Tepi'ki ki'sis tutām, Moon clan; Ana'nk tutām, Star clan (one star each); Anangwa'k tutām, Star clan (all stars together); Ässiba'n tutām, Raccoon clan; Ayēni' tutām, Opossum clan; Pakū'dshi pishike' tutām, Wild cattle clan (Buffalo clan); Magi'swāsh tutām, Bald Eagle clan (supposed to be a race of white people);¹ Kini'ū tutām, Gray Eagle clan; Wabisi' tutām, Swan clan; Animukādshi' tutām, Dog clan; Ka'shek tutām, Cat (domestic) clan (not respected); Wabi' makwa tutām, White Bear clan; Moso' tutām, Moose clan; Nibi'sh tutām, Water clan; Ake' tutām, Earth (Ground) clan; Utche'-u tutām, Mountain clan; Ukadi-ginā'bik tutām, Lizard clan; Pāshi gogishi tutām, Horse clan; Kā'gakshi tutām, Raven clan; Ā'ndākshkwa tutām, Crow clan; Kukukū' tutām, Night Owl clan; Agā'g tutām, Porcupine clan; — (?) tutām, Grizzly Bear clan; Nimki tutām, Thunder clan (much dreaded; thunder was thought to be alive; every thunder man could make thunder); Ki-zhik tutām, Sky clan; Nimēki's tutām, Little Thunder clan; Shangwāshi tutām, Mink clan. There was exogamy of clans and patrilineal descent.

TRUMAN MICHELSON.

¹ Among the Mississippi band of White Earth Chippewa, if an American marries into the tribe, his children will be of the Eagle clan because the eagle is the emblem of the United States. Descent being patrilineal the child otherwise would have no clan. Everybody in the Eagle clan is supposed to have American blood. The child of an Englishman belongs to the Lion clan for obvious reasons. Have we among the Ottawa a similar phenomenon?

On the Etymology of the Natick Word Kompau, 'He stands erect.'

—According to Trumbull, Natick Dictionary, p. 327, this word is related to *omp* 'man,' and Delaware *ape* in *lenape* 'man,' etc. However that may be Professor Prince, *Am. Anthropol.*, xi, 647, has pointed out a direct correspondent in Passamaquoddy, and perhaps one in Micmac. Other correspondents are Fox *nagigāpāw^a* 'he comes to a standstill' (*nagi-*, initial stem 'to halt'; *-gāpā-*, secondary stem denoting perpendicularity; *-w^a*, the pronominal ending of the third person singular of the aorist tense, intransitive independent mode), *pōnigāpāw^a* 'he ceased standing' (*pōni-*, initial stem meaning 'cessation'); Kickapoo *kīwigāpāw^a* 'he stands now here, now there' (*kīwi-*, initial stem meaning 'movement in an indefinite direction'; same as Fox *kīwi-*); Cree *-kābawiw* 'he is standing' (Lacombe, *Cree Dictionary*, p. 89; phonetically *-gāpāw^a* probably; *-wi-* [Fox *-wi*] a secondary coordinative stem, the equivalent of the copula); Montagnais *-kāpū* 'he is standing' (taken from Lemoine); Ojibwa *nin gābaw* 'I stand here and there' (Baraga *Eng.-Ojibwa Dictionary*, p. 243; phonetically *gāpāw^a*?). For the nasal in *kompau* compare *wompī* 'white' (Fox *wāpī*). It should be noted that Baraga does not specify that *nin gābaw* can not be used initially. Since the correspondents in the related languages can not occur as initial stems, I doubt if this can in Ojibwa.

TRUMAN MICHELSON.

The School of American Archæology.—The School of American Archæology, organized in 1907 under the act of incorporation of the Archæological Institute of America, held during the month of August a summer session in the Palace of the Governors at Santa Fé, the headquarters of the School, and at the Excavation Camp in El Rito de los Frijoles, where the School has conducted excavations for the past three summers.

The work consisted of examination and study of the communal house, cliff-dwellings and the ceremonial cave of this deserted Pueblo, excavated in former seasons, and of lecture courses intended to give to regular students and auditors a view of the general field of archeology.

Director Hewett gave a series of peripatetic lectures on the excavations already made and in progress and on the "Culture of the Pajaritan Plateau" as revealed by them. Mr Chapman, of the staff of the School, lectured on "The Development of Design in Ancient Pueblo Pottery," and Mr Harrington, also of the staff, lectured on the language, social organization, religion, and mythology of the Mohave Indians, presenting results of his recent field work in the Colorado basin.

In addition to these courses in American Archeology, Professor Frank E. Thompson of the University of Colorado gave ten lectures on "Primitive Man" and the "Evolution of Culture"; Professor Mitchell Carroll, General Secretary of the Institute, gave a series of lectures on "Greek Archeology" with special reference to the excavations in Greek lands conducted by the Institute and School at Athens; and Professor Lewis B. Paton of Hartford Theological Seminary lectured on "The Ancient Semites," discussing the primitive Semitic life, literature, art, religion, and social organization.

A series of Sunday-evening lectures was given in the Hall of Representatives in the Capitol, as follows:

Jerusalem in the time of Christ. By Dr Paton.

The Holy Cities of Ancient America. By Dr Hewett.

The Early History of Christianity. By President E. McQueen Gray.

Paul at Athens. By Professor Mitchell Carroll.

The excavations of the present season in the Rito were confined largely to clearing the old elliptical communal dwelling in the valley, the excavation of which was more than half completed last summer.

The attendance upon the summer session was very good, about fifty being regularly enrolled.

The Managing Committee of the School of American Archeology held its annual meeting in connection with the summer session, August 24-26.

Alice C. Fletcher, of Washington, D. C., was re-elected chairman; the office of vice-chairman was created, and Professor William H. Holmes was elected.

Standing committees were appointed on finance, the museum, and the scientific and educational work of the School.

Director Hewett reported on the excavations conducted during the past year at Quirigua in Guatemala, on the research work of members of the staff, and the summer session.

Plans were formed for the conduct of the excavations in New Mexico and Central America during the coming year, and for the holding of a second summer session in August, 1912.

THE *American Museum Journal* announces that three very important anthropological collections have been purchased. One from the Jesup Fund is a series of rare objects from the Tsimshian Indians of the North Pacific coast collected by Lieutenant G. T. Emmons. This fills practically the only gap in the series from that important culture area.

The second collection, made by Dr Carl Lumholtz, in the little-known borderland along the Mexican boundary of Arizona, was purchased from the Primitive Peoples of the Southwest Fund. Among the unusual pieces in this collection are the costumes of a fool dancer, consisting of a mask, a crude and useless bow, and other absurd trappings. This is of especial interest since this ceremonial character seems to connect the Papago culture with that of the Plains. Among other things may be mentioned a series of wooden plows introduced into Mexico from Europe by the early Spanish explorers. The Papago were found still practising the art of basketry for which the Pima were at one time famous. The collection contains excellent samples of this almost extinct textile art. The third acquisition, gained through the Jesup Fund, is the General U. S. Hollister collection of Navaho blankets. In this series there are sixty-six pieces, some made before 1850. In materials and dyes there is a full representation: eleven blankets of bayeta, one of natural wool, eight of native dyes, seven of Germantown yarn, twelve of other commercial yarn, and eighteen in aniline dyes. The four varieties of weave practised by the Navaho are fully represented. There are also a few exceptional blankets, one of which represents in its design the Corn God copied from the sand paintings of altars of the Navaho. This collection, jointly with the series recently presented by Mrs Sage and those belonging to the Lenders and Tefft collections recently presented by Mr Morgan, give us a series of Navaho textiles fully representative both as to technique and design.

DR THEODOR KOCH-CRUENBERG of the University of Freiburg, Germany, is engaged in another ethnographical and geographical trip to South America. According to a letter to Dr L. Bouchal his plan was as follows:

"It is my intention to leave Hamburg April 26 in order to reach the Yapura river by way of Para and Manaos. Along its tributaries many tribes live such as the Juri, Passe, Miranya, Uitoto and others who are of great ethnographic interest on account of their highly developed drum-teleggraphy, mask-dances, etc. I intend subsequently to make a trip to the region of the upper Yapura in order to spend some time among the Uma-ua, a Carib people who have pushed themselves far to the west. I hope at the same time to investigate the hitherto unknown origin of the Caiary-Uaupes, Inirida, and Guainia (upper Negro) rivers."

THE Seventh International Esperanto Congress began at Antwerp on August 21 with 1700 delegates, including 60 from America. The

U. S. departments of state, war, and commerce were represented, respectively, by Edwin C. Reed, Secretary of the Esperanto Association of North America; Dr H. W. Yeamans, Vice-President of the American Association, and E. C. Kokeloy. Dr Yeamans, who was President of the Sixth Congress, held in Washington last year, opened the convention. One of the features of the first session was the ovation accorded to Dr Ludwig L. Zamenhof, of Poland, the inventor of Esperanto, when the Spanish consul presented to him on behalf of King Alfonso the Cross of the Order of Isabella.

AN "AMERICAN INDIAN ASSOCIATION" has been founded which met for the first time in Columbus, Ohio, from October 12 to 15, 1911. The objects of the association can best be given from its own circular:

"The American Indian Association is primarily an organization of American Indians. It proposes to bring together all progressive Indians and friends of Indian progress for the purpose of promoting the highest interest of the Indian as a race and as an individual. It asserts that any condition of living, habit of thought, or racial characteristic that unfits the Indian for modern environment is detrimental and conducive only of individual and racial incompetence."

THE Council of the Royal Anthropological Institute of Great Britain and Ireland sent to the recent Imperial Conference in London a Memorial urging the establishment of an Imperial Bureau of Anthropology. The proposal is that the Bureau should be established in London and that it should be managed by a committee composed of the Council of the Royal Anthropological Institute and representatives of the Governments of the British Dominions, of the Indian and Colonial Offices, and of those universities in Great Britain, in India and in the Colonies and Dependencies of the Empire where anthropology is systematically studied.

A NOTABLE addition to the facilities offered by Paris as a center of anthropological research is the Institute of Human Paleontology recently founded by the Prince of Monaco. In the new Institute the Abbe H. Breuil, formerly of the University of Fribourg, occupies the chair of prehistoric ethnography, and Docotor H. Obermaier, former colleague of Professor Hoernes at Vienna, that of geology in its relation to prehistory. Professor M. Boule of the Museum of Natural History, Jardin des Plantes, is the director.

ANNOUNCEMENT is made that a "Navaho-English and English-Navaho Vocabulary" is being prepared for publication by the Franciscan

Fathers of St Michaels, authors of the noted "Ethnologic Dictionary of the Navaho Language." A limited edition only will be published, in two octavo volumes of about 150 pages each, at five dollars per volume, and it will be ready for distribution in all probability in the summer of 1912.

MR HARLAN I. SMITH, formerly of the American Museum of Natural History, New York, has been put in charge of archeology under the Division of Anthropology of the Geological Survey of Canada. It is his intention to organize Canadian archeological work in as systematic and thorough a manner as possible, and to contribute to our knowledge of prehistoric Canada by a careful and intensive study of selected sites.

In the July issue of *Man* Miss A. C. Breton describes some of the museums of archeology and ethnology in America, including the New York Natural History Museum, the Brooklyn Institute, the Peabody Museum of Harvard College, the Yale University Museum, the Philadelphia Academy of Sciences, the National Museum at Washington, and the National Museum of San José, Costa Rica.

DR CHARLES G. WELD has bequeathed to the Boston Museum of Fine Arts his collection of Japanese paintings and lacquer work which has been in the custody of the museum as a loan collection and to the Peabody Museum at Salem all the property now in the custody of that institution, including the collection from the South Seas, and the sum of \$25,000.

MR ARTHUR A. ALLEN, instructor in neurology and vertebrate zoology in Cornell University, will spend the next year in South America as chief of an expedition organized by the American Museum of Natural History. The expedition will go to Colombia, its immediate object being to explore ruins and collect antiquities.

THE eighteenth Congress of Americanists will be held next year in London, from May 27 to June 1, the invitation issued by the Royal Anthropological Institute, through its president, Mr A. P. Maudslay, having been accepted by the congress. The president-elect is Sir Clements Markham.

THE results of the scientific expedition of the Planet have now been published. Volume V is the only one that will interest Anthropologists. It contains ethnographical and anthropological sketches of the Basuto and of the inhabitants of the Hermit Islands, by Kraemer.

WE learn from *Nature* that the geological and archeological collections made by the late Rev. E. Maule Cole, all the objects of which are connected with East Yorkshire, have been presented to the Hull Municipal Museum by Lady Philadelphia Cole.

DR FRANZ BOAS, of Columbia University, New York City, and Dr Alexander F. Chamberlain, of Clark University, Worcester, Mass., have been made corresponding members of the Sociedad de Folk-Lore Chileno, Santiago de Chile.

PROFESSOR KARL PEARSON, F.R.S., has been appointed to be the first occupant of the chair of eugenics in the University of London, established by the legacy bequeathed for that purpose by the late Sir Francis Galton.

PROF. HUTTON WEBSTER of the University of Nebraska and Dr A. A. Goldenweiser of Columbia University attended and read papers at the recent meeting of the British Association for the Advancement of Science.

PROFESSOR BALDWIN SPENCER has been making valuable observations on the natives of the Adelaide River Plains and Melville Island, in connection with a scientific expedition in Australia.

SEÑOR GENARO GARCÍA has been supplanted as Director of the Museo Nacional de Mexico by Señor Robelo and Senor Battres as Inspector of Antiquities by Ingeniero Rodriguez.

EXCAVATIONS are being carried on by Russian archeologists about the lake of Ladoga for the purpose of finding the burial place of Rurik, the famous early ruler of the Russians.

FUNDS are being collected for the purpose of erecting a monument to honor the memory of the late Professor Cesare Lombroso, at his native place, Verona, Italy.

DR JOHN BEDDOE, F.R.S., a practising physician who has made important contributions to anthropology, died on July 19, aged eighty-four years.

MR M. R. HARRINGTON was appointed Assistant Curator of the American Section of the University of Pennsylvania Museum last January.

DR NICOLAS LEON has been named Professor of Anthropology at the Museo Nacional Mexico.

THE Seventh International Congress for Criminal Anthropology met at Cologne, Oct. 9-13.

American Anthropologist

NEW SERIES
D

VOL. 13

JULY-SEPTEMBER, 1911

No. 3

NOTES ON THE KADO, OR SUN DANCE OF THE KIOWA

By HUGH LENOX SCOTT

I. INTRODUCTION

THE Plains of the West were inhabited at the time of their discovery by a number of wandering tribes that depended upon the buffalo for subsistence. They spoke different languages, yet possessed together a culture that was distinctive of the Plains.

One of the most conspicuous elements of that culture, after the sign language, was the Medicine or Sun dance.

It is not known in what tribe this dance originated. It must, however, have started in the north, for all the tribes now on the southern Plains that practise the ceremony are, like the Kiowa, intruders, and brought it with them from the north.

The Kiowa received their Sun dance from an old Arapaho, to whom it was given by the Crows. It may have been that some of its features originated with the Crows, and were afterward amalgamated with others from a different source, after the Kiowa left the northern Plains.

The Kiowa, for instance, do not allow any cutting of flesh or shedding of blood in their Sun dance, whereas the Crows, from whom the Kiowa received the ceremony, cut themselves like the Dakota and Blackfeet, as well as the Southern Cheyenne and Arapaho, who migrated south after the Kiowa had moved down, packing their property on dogs.

The Pawnee have been considered somewhat original in their culture. Some of the customs of other tribes have been traced to them; they were long in the district where found at the discovery, and appear to have reached it from the Southwest, according to their traditions, while their bloody sacrifice of captives to the Morning Star had a Mexican cast. They were enemies of the Kiowa as far back as the latter can remember, down to March, 1873, when peace was made between them on the Washita.¹ The Comanche preceded the Kiowa, moving southward from the headwaters of the Platte and the Arkansas, moving their property with dogs. They left behind them their relatives the Shoshoni. The Comanche have no Sun dance, nor do their western relatives the Lemhi, according to Lowie, whereas the Shoshoni not only have a Sun dance but cut themselves like the other northern Plains tribes. It is therefore probable that the Comanche left the Shoshoni before the acquisition of the Sun dance. The former do not appear in Spanish writings as being in the south before the year 1700.

It is the view of the writer, then, that the Sun dance originated on the northern Plains—we can follow it certainly from the Kiowa to the Crows in one instance, and the Crows may have been the tribe which originated it, Pawnee influence possibly being responsible for the torture features, although we have nothing definite pointing to the Pawnee,² other than the fact of their ceremonies, for the Morning Star.

The Kiowa and Kiowa Apache both say that they have been together ever since they grew up as a people, migrated together from the north, and have the same Sun dance. The Kiowa Apache have a regular, appointed place in the Kiowa ceremonial circle.

Those of us who study the Indian in his home, possibly from the viewpoint of a single tribe, are apt to take a narrow view of the customs and ceremonies observed, but it is a fact that a tribe can not

¹ Battey, *Life and Adventures*, p. 130.

² The counterpart of the torture features in the old world is found in India and is called "hook swinging." "A place on the shoulders is beaten by the priest until benumbed. After that the hook is fixed into the flesh thus prepared, and in this way the unhappy wretch is raised in the air. While suspended thus he is careful not to show any sign of pain, and it is done in fulfillment of a vow for recovery from sickness." —Dubois, *Hindu Manners, Customs and Ceremonies*, p. 605.

really be known from what is learned from that tribe alone. It has been well said in an analogous case that "he who knows but one language knows none." We must therefore study each tribe not only by itself but also in the light thrown upon it by our knowledge of other primitive peoples and of the literature bearing upon the whole subject, then we will find that many of the habits and customs of primitive man have their counterparts among tribes of like degree of culture and similar environment, not only in their own neighborhood, but in every part of the world; so that what would otherwise appear to be an isolated case is, in many instances, proven to be one of a world-wide series, and this will be found to be true of the Sun dance.

The Kiowa considered the Kado to be their most important ceremony, the whole tribe participating therein. It was a religious drama, the ceremonial worship of the Sun in his vernal splendor, as the creator and regenerator of the world.

They believed that it warded off sickness, caused happiness, prosperity, many children, success in war, and plenty of buffalo for all the people. It was frequently vowed by persons in danger from sickness or the enemy, but was determined upon by the *Taimay* keeper, who announced the time and place.

The corresponding medicine-lodge of the Cheyenne is called¹ "The new life lodge" according to the interpretation of the priest. The name means not only the "lodge of the new life" but the "new life" itself, and the performance of the ceremony is supposed to recreate, reform, reanimate the earth, vegetation, animal life, etc. When the writer lived among the Dakota he used to hear them call their Sun dance "Wi wakan wacipi," literally "Sun medicine dance." In his *Siouan Cults*, J. O. Dorsey, a much more competent Dakota scholar, calls it "Wi wanyang wacipi," literally "Looking at the Sun they dance." Dorsey is more likely to be correct in this matter, though possibly both names may be correct in different localities. However that may be our names "Sun dance" and "Medicine dance" evidently take their origin from this source. The sign name for the dance is made by imitating the blowing of

¹ G. A. Dorsey, *Field Columbian Museum Publications*, 103, vol. IX, no. 2, p. 57.

the whistle each dancer carries, the looking upward at the sun, as well as the up and down dance movement of right hand and shoulders in tune to the music of the drum and whistle. This sign name is the same for all the Sun dances of all the tribes both north and south, although these have different names in the spoken tongues.

The principal element in the Kado is the *Taimay* which is an image brought originally to the Kiowa from the Crows by an old Arapaho, and all the keepers of the Taimay have since been of the blood of that old Arapaho.

The Taimay is in the likeness of a small person, or doll, without legs. Its head is a small round stone covered with deerskin painted to resemble a person. It wears a shell gorget and has an eagle feather on its head; its body is made of deerskin and has short eagle body feathers hanging down all over it.¹

When used in the dance, the body is tied to a staff about six feet long, stuck in the ground, in front of a cedar screen, which is opposite the main door, in the rear of what corresponds to the altar place, though there is no altar. This cedar screen makes a retiring place for the participants in the dance.

When not in use the image is kept rolled in various wrappings in a parflêche with a moon painted on it. The first wrapping is a white polecat's skin that was captured from the Pawnee about forty-nine years ago; the second is the skin of an antelope; the third is of calico. This whole bundle is then put into the parflêche.

The polecat's skin was the pipe bag of a Pawnee who was killed the fall before the "Smallpox Sun dance" on the "Red Sleeve river" (Pawnee Fork of the Arkansas in Kansas), according to the calendar history of the Kiowa, obtained by the writer from the hereditary keeper, covering a period of more than sixty years. The "Smallpox Sun dance" was held in 1862 and the Pawnee was therefore killed in the fall of 1861. This calendar was the first of those discovered, and led to the discovery of the others mentioned by Mooney in his "Calendar History of the Kiowa."² The Scott calendar is now in the Museum of the University of California.

¹ See pl. XVIII, *b*; pl. XIX, *d*; pl. XX, *h*; pl. XXI, *a*; pl. XXII, *b*.

² 17th Ann. Report of the Bureau of American Ethnology, p. 143.

Other dates in Kiowa history during the last sixty years may be checked from these various calendars with considerable accuracy.

The Taimay image is kept with the greatest reverence and is never exposed except at the time of the Kado. Mooney tried in vain, for a year, to get a model of it, but, although many Kiowa were familiar with its appearance, it was considered too sacred to be copied, and he left the west without it. Fortunately I was able to procure one, which was sent after him, and it is of this he speaks in the memoir above cited.¹

The Kiowa say that the word Taimay has for its only meaning "mosquito" and they have lost all idea of the connection of the mosquito with the image, or the dance, if any ever existed.

The dance was usually held in the spring. They say "We watch the white (sage) grass. When that is about a foot high, and the horses are all fat, that is the time," but circumstances might and frequently did delay it until after that time. In 1873 it began on June 16; the next year it did not begin until July 3.² It has been held in the middle of summer, and on several occasions there have been two in one summer. There were some years when circumstances prevented it altogether. It could not be held while the Taimay was in the possession of the Osage, from whom it was recovered in 1835, after peace was made with that tribe, a consequence of the Dragoon expedition of 1834 (the initial expedition of the 1st Dragoons described by Catlin in his work on *The North American Indians*). There was no dance held in 1870, the year the old Taimay keeper, An-so-teen, or Long-foot, died. The last Kado was held in 188—; the writer saw this Sun dance pole standing on Oak creek not far from the big bend of the Washita as late as 1892.

Formerly two small images were displayed with the Taimay—their staffs stuck into the ground in front of the cedar screen—but they were captured by the Ute in 1868 in a fight on the upper Canadian, near Adobe Walls, in the vicinity of what the Kiowa call "Red Bluffs" or "Red Promontory." The little images were kept with the Taimay, by the Taimay keeper, until Long-foot "took

¹ Page 242, plate XIX.

² Battey, *op. cit.*, p. 166.

pity" on Comalty, the uncle of the present Comalty, and gave him one of the little ones to keep, but kept the other one with the Taimay. The small images were called "man" and "woman" respectively. Sometimes the "man" image went to war, but the "woman" never went

The other ceremonial articles belonging to the Kado were:

1. A fan made of the tail-feathers of the raven—lengthened out and stuck through a hoop into a handle (pl. XVIII, *d*; pl. XX, *g*).

2. A bison's skull, painted half red and half black; the eye sockets were stuffed with plugs made of long leaves of a plant that grows near the water—possibly flag leaves—by doubling the blades, then tying a string around the bunch, about six inches from the bight, thus making the bight into a round puff. The ear and nose cavities were treated in the same way, because "this pleased the buffalo." The black paint represented the black paint used by a successful war party; the red paint represented the attainment of old age. This skull and its symbols therefore were prayers for success in war; for the attainment of old age; for an abundance of buffalo for all the people. (Pl. XIX, *c*.)

3. A woman's root digger. This was sharpened and stuck into the ground; the stick was of ash and dressed like a man; the head was somewhat smaller than one's fist, and had a breath feather (*i. e.*, one of the fluffy, downy feathers that grow under the long tail-feathers of the war or golden eagle (*Aquila chrysaetos*), and flutter when breathed through); the breast has short eagle body feathers hanging down like the Taimay. This stick was an innovation made by Komaudy and has no medicine power; it is not known what he intended to represent by it. (Pl. XIX, *b*.)

4. Two small hollow mounds of clay used as "censers" in which live coals were kept and upon which dried cedar leaves were sprinkled, the smoke from which was used as incense, a "sweet savor." (Pl. XIX, *a*; pl. XX, *d*, *f*; pl. XXII, *c*.)

5. There were a number of ancient pipes kept with the Taimay, one especially spoken of as a "straight pipe" used in drawing the buffalo into the medicine lodge; it is believed that the straight pipe was the earliest of all varieties of pipes.

6. Two rawhide rattles (pl. XX, *c*).

The Taimay was regarded as the mediator between the people and the Sun power, as appears from some of the prayers made to it. They say: "The Father above made you for our life. We do not

know him. We can not see him where he is. Maybe you know him. Ask him to give you more power for our life," etc. The Taimay is supposed also to watch over the fortunes of the people. This is shown by the story of Komaudy who was lying, by himself, abandoned for dead in Mexico when he heard the Sun-dance whistle far off at night and the Taimay came to him and told him that "he was not going to die but would recover and get back to his people. And he got back."

The truth about this image, however, seems to be that it is used to give concreteness to their vague ideas of the Sun power, something that they can take hold of and endow with attributes—as an imaginative child does a doll—and dress up like the Samoyed stones described by Tylor.¹ "The Samoyed travelling ark sledge with its two deities, one with a stone head, the other a mere black stone, both dressed in green robes, with red lappets and both smeared with sacrificial blood, may serve as a type of stone worship." "The Virgin of the Caridad de Cobre" of eastern Cuba, the "Virgin of Antipolo" near Manila, and the "Santo Niño" of Cebu, are small figures about 18 inches long, dressed in jewels, gold, and velvet, that are held in great esteem by the devout and have come down from a respectable antiquity. The "Virgin of Antipolo" used to make many trips with the Spanish galleons between Manila and Acapulco in Mexico to protect them against the corsairs. It is carried in religious processions in Manila, escorted of late years by 15,000 persons.

When the Taimay keeper went into the medicine-lodge his face was painted, like that of the Taimay itself, with red and black zigzag lines downward from the eyes (pl. xviii, *b*; pl. xx, *h*). He wore a skirt made of deerskin painted yellow, and his body was painted the same color. Why this color was used was not known,—it was to them just a part of the ceremony, handed down by their forefathers, and probably originated in a dream; there are many such subjects they are unable to explain, and still others of whose meaning they have a dim consciousness but are unable to elaborate and of which the meaning can sometimes be made out through their prayers. The

¹ E. B. Tylor, *Primitive Culture*, vol. II, p. 163.

Taimay keeper had sage tied around his wrists during the dance; he held a bunch of live cedar in his hand, and in his mouth an eagle-bone whistle with an eagle feather attached. A blue or green (many Indians do not distinguish between these two colors) sun was painted in the middle of his chest and back, and he wore on his head a cap, made of the skin of a jackrabbit with breath-feather attached. (Pl. XX, *h*; pl. XXII, *g*.)

The Taimay keeper had four assistants, chosen for four years each, to whom he taught the songs and ritual, so that in case of accident there would always be some one who could direct the ceremonies. These four men had deerskin skirts painted white, and a wreath of sage, with eagle feather, on the head. Sage was tied around both wrists and ankles and a bunch of live cedar was carried in the hand. These men did the ceremonial painting, and assisted the Taimay keeper. (Pl. XVIII, *a*; pl. XXII, *f*.)

A scalp taken from the Taimay shields, with two long eagle tail-feathers attached, was fastened to the breast and another on the back, and a green sun and two crescent moons were painted on the breast and back. Sometimes formerly these suns and moons were cut into the skin, not at the Sun dance but at some other time. (Pl. XVIII, *a*; pl. XXII, *f*.)

The dancers had no caps or wreaths, but each wore a deerskin skirt painted white, and their faces and bodies were painted the same color. (Pl. XXI.)

The Taimay keeper, his four assistants, and all the dancers had eagle-bone whistles with eagle-feathers attached, and all persons connected with the dance wore their breech-clouts outside of their skirts. (Pl. XVIII, *a*; pl. XX, *f*; pl. XXII.)

The Taimay keeper entered the medicine-lodge in procession with the others and did not eat or drink or go out of the lodge for four days and nights.

During the time of cutting the poles and branches for the construction of the lodge, the people were scattered through the woods laughing and singing, and in old times there was more or less promiscuous intercourse between the sexes, married and single, but to this no stigma was attached. While not exactly open,

this was considered the usual thing at this time and any man that wanted any woman could ask her. Compare the account of Herodotus of the temple of Mylitta in Babylon, and Hartland's account of European spring festivals.¹ The Russians have their festivals in the spring—a general feature of those festivals was the prevalence of promiscuous intercourse between the sexes. Similar festivals were held at one time all over Europe. Consult also the work of the Abbé Dubois,² giving an account of the ceremonies in connection with the car of Juggernaut where "men and women were mixed indiscriminately and liberties taken without entailing any consequences, delicacy and modesty are at a discount during these car festivals." Compare Tanner's *Narrative*, p. 135, as to license among the Chippewa at certain times.

The Kado season was a time of great jollity and rejoicing for the people, and of the reunion of families. The whole tribe was present, with visitors from many other tribes, and all sorts of feasts, soldier dances, and other entertainments were going on among the lodges whenever the people were not actively engaged with the Sun dance proper. By this means the young people of the various villages that lived apart from each other a large portion of the year, were brought together and became acquainted, the nation was solidified, and the effect of holding the dance upon the manner in which the Sun Father would regard them for the next year was considered most important.

While there was a general resemblance between the medicine-lodges of the various tribes (the Crows used raw buffalo hides instead of branches to make the shade, and some of the village Indians on the Missouri had ceremonial earth lodges), and the dancing and whistling with the eagle-bone whistle are similar rites, there were many differences to be noted among the details of the Sun-dance ceremonies of different tribes. The Kiowa, for instance, say nothing about the large collection of buffalo tongues used by the Crows and Blackfeet, but the most conspicuous difference is seen in the Kiowa reluctance to shed blood: there was no

¹ E. S. Hartland, *Primitive Paternity*, vol. II, p. 191.

² *Hindu Manners, Customs and Ceremonies*, p. 611.

cutting or skewering, no dragging of buffalo skulls as noted in the north. Even the medicine bull must be shot through the heart without wounding the lungs, so that he would not belch any blood, for otherwise misfortune would happen to the people. And no finger joints or bits of human flesh were sacrificed, in which respect it differed from the Dakota Sun dance witnessed by the writer in 1879, where the female relations of the dancers would cut off a finger joint, or a bit of flesh out of the arm, and hold it up as a sacrifice to the sun while making a prayer, and then cast it down at the foot of the Sun-dance pole. The Cheyenne and Arapaho, as well as the Caddo, Wichita, and Comanche, although the last had no medicine-dance of their own, were accustomed to visit the Kiowa dance in large numbers for the sake of the general jollity going on, much as any people gather in crowds at a country fair. In every religious ceremony of the Plains Indians white sage (*artemisia*) was used in various ways on the ground or worn on the body, and green cedar carried in the hand, while dried cedar leaves were used, whenever it was possible to obtain them, to make an incense, though it was believed that any evergreen would do.¹

The writer has never seen any reason given for this, and the hundreds of Indians who have been asked for a reason always replied that the custom came down from their forefathers, without a reason, or else it was directed by their culture hero before they grew up as a people. There is, however, a fundamental reason other than the odor, which was not understood until it was unconsciously explained in a Kiowa prayer to the Sun: "Father! You give us this tree, cedar, because you love it. Every other tree dies, and grass; but this tree, it does not die in winter, its leaves do not drop off in the fall. We think you love it. You take care of it. You keep it always green. You give it a good road. I want you to smell its smoke." The same reason applies to the sage, which keeps green all winter, and the sacredness of these two comes fundamentally from their difference from other vegetation—from the fact that the Father has signified his especial love for them

¹ In fact the writer has been asked to get some of the evergreen leaves of various kinds growing in the Smithsonian grounds in Washington.

by taking care of them and keeping them alive during the winter, when others, to which he is presumably indifferent, are dead. The smoke of the cedar and the sweet vanilla grass are used as an incense, not with the idea primarily of purification, but because the odor is pleasing to "the Father." This custom of offering incense must be very old and probably came to the Christian Church out of a past of great duration.

The above Indian information, as well as the following Kiowa accounts, were obtained by me during nine years spent among the wilder tribes of the present Oklahoma. They were given in the sign language of the Plains and were received directly, without the intervention of an interpreter, or the use of any spoken tongue: it is probable that the following is the first published account of an Indian ceremony described by Indians by means of the sign language alone, and may prove interesting to those who do not know of what the sign language is capable. The illustrations were drawn by Hawgone, a Kiowa.

During this description of the Kado there were present Taybodah, Poor Buffalo, Frizzlehead, Heidsick, and Stumbling Bear, the oldest and most respected men of the tribe. They had all taken part in the Kado from their youth, and had seen many dances. I-see-oh (old name Tah-bone-moh), who had had daily intercourse in the sign language with the writer for nine years, was their "spokesman."

II. THE KADO

"In old times the Kiowa villages used to be divided in winter and camped in different parts of the country, where they would get plenty of game, good grass for the horses, plenty of wood and shelter from the cold, as well as safety from their enemies. In the middle of winter, the man who kept the Taimay would consider about having a medicine dance the next spring—if they make a Sun dance it will drive off sickness from the people. He would be living somewhere with a few lodges only, and would call in the people and tell them what he had determined upon, direct them to send messengers to the other villages, and tell them that in the spring he would make a Sun dance at a certain place when the

grass would be a foot high; that they must stop all foolish or crazy work, like going to war, and everybody must come where the medicine or Taimay keeper appoints,—nobody can stay away. Then they all move in to the place appointed by the Taimay keeper. He then asks if everybody has arrived, and they say, 'Yes, all the lodges are here.' Then he says: 'We will make a medicine lodge. Bring me a gentle horse before sunrise.' Next morning he gets on the horse and the first thing he says is: 'You must stop all quarreling and all foolish conduct. I forbid it!' He has the Taimay in a sack tied on his back by a string around his neck. Some chief then harangues the villages: 'Do not go out to look for your horses. Stay in your lodges; the Taimay keeper says so!' Then the Taimay keeper rides around on the prairie at a distance from the village; everybody looks at him and watches him; he goes all the way round the village to the place he started from—then he goes to his own lodge and dismounts. All Kiowas know him—he forbids all quarreling and crazy work. If any man thinks of doing that he is afraid of the Taimay keeper. Two young men are sent to look for a tree, just like scouts looking for the enemy, for the center pole, near where there is plenty of small green timber and a wide stream. They look for it carefully, not in a hurry; they do it wisely, and all move over near it and camp. If they do not find the tree they come back and the chief harangues the village: 'Have patience. We will soon find it.' They search during the early morning because they can not drink anything while looking for it—they are afraid of drinking. If they drink water then there will be a great deal of rain which will spoil the dance; they are afraid to wash themselves also and throw out the water. When they find the tree, which must have a convenient location and suitable shape, they come back and tell the Medicine-keeper: 'We have found the tree.' During this time the Taimay keeper does not do any work. When he wants anything done he tells the people and it does not fail; everybody is afraid of him. During the time of different kinds of work they drink no water—everybody is afraid of the Taimay keeper; when the work is over then they drink. When the Taimay keeper announces that they have found the tree, the lodges all move over

near it. They call in the soldiers,—there are five bands of soldiers, each one just like your troop of cavalry. The mounted soldiers move out in front and maneuver in the prairie: then come the lodges with the women and children—soldiers on each flank and rear, just as they used to march moving camp near the enemy; the fifth company (Rattle, foot-soldiers) remains in camp. The Taimay keeper is head of all. He has the Taimay on his back. There are 10 or 20 old men with him. He looks back at the soldiers coming. They arrive and dismount. The soldiers all sing and maneuver as they march. When they dismount the Taimay keeper smokes one pipe of tobacco; then they all remount and start out singing and maneuvering: they go on for about a mile when they halt again. The Taimay keeper smokes another pipeful of tobacco. This is done four times in all, and when the fourth pipe has been smoked everybody has been told where the tree is and all hurry to put up their lodges [Battey says the men rush to strike a pole set up in the new camp site], which are pitched by bands in an incomplete circle, the opening toward the east, the doors of the lodges opening toward the center of the circle. The order of the bands is shown in the accompanying sketch.

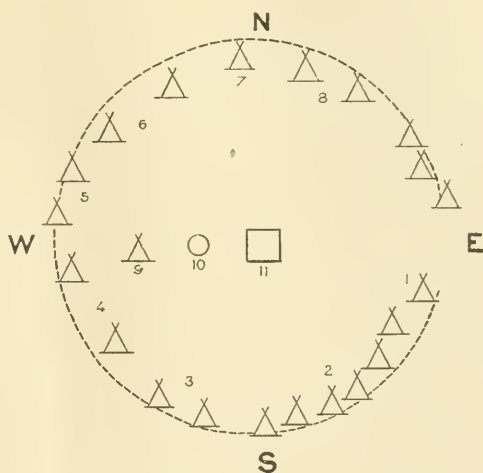


FIG. 53.—Kiowa camp circle. 1, True Kiowa. 2, Elk. 3, Sindays men. 4, Black men. 5, Shield men. 6, Biters. 7, Kiowa Apache. 8, Medicine lodge. 9, Taimay keeper's lodge. 10, Sweat lodge. 11, Medicine lodge.

“The foot-soldiers who remained in the old camp have two horses. They remain there until the village reaches its camp ground: then they send out two mounted scouts; they look for the village just as scouts do when they go to war. After a while they are seen mount-

ing a hill on their return, and they report the village location. Then the foot-soldiers all move out as did the others, making four halts—they make a good line. When the village reaches camp a wide lodge of several lodge-covers is made and food cooked so that the foot-soldiers will have something to eat when they return. They go to the wide lodge and everybody drinks water and eats until sundown. Next morning before sunrise a man goes to look for a buffalo bull—not a cow—a bull. Two men saddle up, go to the Taimay keeper's lodge, and say: 'Wake up! We are going to look for the bull.' The Taimay keeper has a little piece of medicine, $1\frac{1}{2}$ inches long, made of a piece of wood or a root that came from the far north, and it is lent to the man who kills the bull. Other people never have it and do not know what it is. The Taimay keeper says to them: 'Go out on the prairie and find a little herd of buffalo. Have two arrows in your hand—not four; bite off a little piece of that wood, chew it up, and spit on the arrows.' Then he stops, and the two men go out on the right side of the village. The killing of the bull is done by the man who holds the office; nobody else can do it. He must be a man of high standing, able to count coups. Honameatah has it now; Tohansen, his brother, used to have it. They find a small herd of bulls and the buffalo killer starts after them. The other man stays back and watches him. He first counts his coup before he can shoot. He does not shoot two arrows unless the first one fails. He shoots the bull right behind the shoulder. He chases the bull so that when he falls his face will be pointing toward the east, and he falls dead on his belly—not on his side. He dies with his face toward the east and on his belly. That is a wonderful thing. He does it himself. Everybody knows it. He is shot in such a way that no blood comes out of his mouth. In past times when blood has come out of his mouth great sickness has come to the Kiowa, and that is what they are afraid of. They are afraid also if he falls on his side. The bull is generally killed quite early in the morning. When he falls with his face to the east, the other man comes up, looks at him, and says: 'Yes, he is dead.' They picket their horses toward the south. They gather a big bundle of sage grass and bring it to the bull. They put some dried chips about fifteen feet west of the bull and

spread sage on them. Then they go to his head. They have a very sharp knife; a buffalo bull has a very tough skin; it is a two-year old; the skin about the neck is the thickest. Before the buffalo killer can cut the skin he must count a coup or tell where he struck his enemy. He then makes an incision over the right hip bone. He does not saw the hide; he rips it, from the point of incision up to the shoulder, then to the butt of the ear and corner of the mouth, without taking the knife from under the skin. Then he goes to the left hip and rips the hide as he did on the right side without getting in front of the bull. Then he goes back, cuts off the bone of the tail, and rolls the skin of the back until he gets to the horns, and takes the skin of the face all the way to the corners of the mouth and around the nose. Then they lift it up and move backwards, keeping the head toward the east, and spread it out upon the sage. They do not drink any water, but clean meat from the inside of the hide. Then the man who killed the bull brings up the horses and covers his saddle with sage. The horse is held with his face to the east. The skin is unrolled about three feet, the head outside, then put on the saddle. The man goes around the horse's tail to the right side, gets on the horse behind the skin, and makes a prayer to the Sun: 'Look at me, Sun! Let our women and children live good, and buffalo cover the earth. Let sickness be put away.' Then he doesn't turn to the right; he turns always to the left and goes to the village. He trots fast. In the meantime the people are watching for him. When he gets near, he goes slower. The first man who sees him, calls out: 'There he is coming, bringing the medicine bull!' Then he arrives near the end of the enclosure and stops four times. At this time the biggest chief of the Kiowa is in his lodge dressed in a deerskin shirt, with scalps down the breast and arms and down the sides of his leggings. He comes out, everybody watching him. He goes to the horse of the buffalo killer. The horse is facing the Taimay keeper's lodge in the enclosure. He unfastens the hide, going around the horse always by the tail. He gathers the hide and the sage, and puts the hide down on the sage at the Taimay keeper's door. Then the women and children all bring presents and throw them down there and

make a prayer to the Sun. They all have the same prayer: 'Let us all attain to the way-off old persons' road' [i. e., 'Let us all attain old age'], and then they all scatter to their lodges.

"Some time before a big sweat-house has been made inside the enclosure and in front of the Taimay keeper's lodge; it is well covered with robes. After the prayers are all over and the people separate, fire is brought and they put hot stones into the sweat house. Then they bring two chiefs—the one who had the scalp shirt and one other. They come with their backs toward the east, one behind the other, and take hold of the robe with the right hand. The first one takes the robe so that the head laps over the right arm, and they take it into the sweat lodge, carry it around by the south side, and lay it flat with its face to the east. Then the Taimay keeper with a few others also enter. They close the door and put water on the hot stones. Then they open the door for a while. This is done seven times. Then they stop and come out. [Without doubt a series of prayers was offered inside, but the investigation of this was left for another occasion which never presented itself.] Then the two men carry the robe out around by the north side, stopping four times. Then they go inside the door, turning to the south, and lay the hide on the sage prepared for it in the Taimay keeper's lodge, when everything is over for the day. That is the second preliminary day. The next morning, about nine o'clock, they have a sham fight ['a laugh fight'].

"Everybody knows about it. They have breakfast, drive in the horses, saddle up, and mount prepared as for war. They tie up the ponies' tails. Some have guns, some spears with eagle feathers, also shields and warbonnets. The foot-soldier band takes its place in the center of the enclosure. The four mounted bands collect a short distance from the village and come galloping through the gate, turn to the left, go completely around inside the enclosure and out again, turning to the left, keeping around outside, and in again as before. They do this four times, and then go out and stop at some place away from the village. The foot-soldiers then go to where the center tree was found. They make a shield-house [fort] around the tree, and taking their guns, go outside, forming a line

toward the approaching mounted soldiers. The latter charge them, both firing at each other for fun—there are no bullets in the guns. When the horse-soldiers charge they send dust high in the air and the foot-soldiers retire into the fort. The horse-soldiers ride around them, shooting into the fort and striking the foot-soldiers with camp-sticks and spears. So much dust and smoke makes it look like a real fight. When the foot-soldiers get tired they dash out of the shield-house, and that ends the fight. Then they cut down the tree for the forked center pole. It is cut by a woman whose regular office it is to chop the tree—usually a Mexican. All the time I was growing up the same woman cut it. She became old and died, and another woman took up her road. She was a good woman. Her children grew up good, like these children. She was afraid of anything foolish, afraid to do anything wrong. They fell the tree in any direction, and cut the limbs all off, leaving only the two forks. A mounted soldier sees a woman he likes: if she wants him he asks her to ride behind him. Sometimes she says 'yes' and mounts behind him. He has a rope attached to the tree and tied to the saddle, and many of them drag the tree, stopping four times on the way, to where it is to be planted in the center of the enclosure, everybody singing. The outside trees are brought in in the same way. They take the center pole to the hole that has already been dug for it by a band of women soldiers, all women. Only one man is with them, a chief. He puts in the center pole: that is his office. When the middle pole is up, a rope is thrown over the crotch, and the two chiefs bring the robe, tie it to the rope, and many men pull it up to the crotch and tie it so that its face will be to the east, not in the crotch but across the Y. When the dance is finished, the hide is left there. Anybody who rides by and sees it, says: 'Yes there it is. That is the medicine-bull's hide left there.' After the pole is put up and the hide tied to it they stop for that day (3rd).

"On the fourth day the wall poles are brought in and planted so as to make the medicine-lodge from $\frac{1}{2}$ 42 to 60 feet in diameter. On the fifth day the walls are made of branches and the roof is finished. When the walls are finished, being wattled, the old women soldiers go out and fill their robes with clean sand, bring it into the

medicine-lodge, and cover the floor all over, and they sweep it out smooth early every morning. The sand is also piled up in a cone around the foot of the middle pole and a flat stone is put in the doorway (pl. xx, *g, h*). Whenever a dancer goes out of the lodge he sets his foot on that stone. The walls and roof are finished. On the morning of the sixth day they 'herd' the buffalo. They then take a lot of robes with the heads and hair on them and stretch them on a frame of willows so that a man can get inside of them and look like a buffalo (pl. xxiv, *a*; fig. 54). There are a lot of men and boys and one woman—always the same woman: that is her road [office, custom]—who go out on the prairie without weapons and have a sham fight, butting and kicking each other. After that they assemble with their robes on, the boys with colt robes on, on the plain near the lodges just like a herd of buffalo, some standing and some lying down—a great many of them just like a big herd of buffalo.

"One man, well dressed, appears with a necklace, a quiver, and bow and arrows in his left hand, and a firebrand in his right (pl. xxiii, *a*). He goes along, all the people watching him. The buffalo out on the flat do not see him. He goes into the medicine-lodge and sits down. There are many men in there, and he sits down with them. He says: 'Look at the buffalo out there!' He talks awhile with the Taimay keeper, then goes out and runs over toward the buffalo with the firebrand in his right hand, going to their windward side; they smell the smoke and all jump up and gaze at him and run away from him, just like buffalo. The people in the village all look at them and say to each other: 'They are just like buffalo.' A man with a straight pipe (pl. xxiii, *b*) stoops down, with his back to the Taimay keeper, who stands in the door of the medicine-lodge (pl. xxiii, *c*). When the buffalo jump up he points his pipe at them and draws it back (thus drawing the buffalo). This is done four times, the keeper each time going back toward the door, until the fourth time when he goes in and stands at the west side. The buffalo are drawn in thus by him and run round outside the medicine-lodge four times. Then, entering, they run round the middle pole four times and then lie down. This man is called 'the man who brings the buffalo' (pl. xxiii, *b*), and the one with the lighted

firebrand is called 'the man who drives the buffalo' (pl. XXIII, *a*). (Thus they dramatize the old method of taking the buffalo into the pound.)

"Ten men wearing robes come in and sit down, and the whole village comes and stares at the buffalo. Three men then come in, each holding a pipe. These pipes are straight—the bowl does not



FIG. 54.—Man covered with a robe supported with sticks to represent a buffalo.

turn up. They have wooden stems, and are made of black stone, like that black stone pipe Honameatah gave you that used to belong to Old Tohausen who was chief of the Kiowa for so many

years. Those pipes are kept with the Taimay by the keeper, and he lends them to the three men, during the dance. They are very old and belonged always to the Taimay. The three men hold these pipes with mouth-piece presented. One stands still and the other two go and pull the robes off the faces, searching for the man who has counted the most coups. They pull the robe off of a man's face, look at him, and say, 'No that is not the man,' and keep on until they find him. Then they call out his name to the third standing man, who comes and touches him with the pipe and calls out his name as loudly as he can, 'Big Bow is a fat buffalo!' and puts a short stick on his hump (of which he carries four), and everybody claps his hands. This is done four times, one each for the four biggest chiefs who have struck their enemies the greatest number of times. Then all go out, and the sun goes down.

"The first day they move into the ceremonial camp circle. The second they kill and bring in the hide of the medicine-bull. The third they have a sham battle and bring in the middle pole. The fourth they bring in and plant the wall poles. The fifth they put on the roof poles and sides, and sand the floor. The sixth they held the buffalo lodge, and in the evening at sundown the dancers enter the medicine-lodge. That evening at sundown those who are to dance without water go into the medicine-lodge. These men are to dance four days and nights without anything to eat or drink. The Taimay keeper dances with them. If a dancer can not hold out he goes home and gets something to eat and drink but does not go back. A great many begin the first day, but by the next night they begin to leave. They fall in number until the morning of the fourth day. Only a few are then left, five or six, all weak with hunger and thirst. I [I-see-oh] did that once. I was there with them dancing. It was pretty good at night when it was cool, but it was very hot in the middle of the day; we almost died from the heat and want of water. On the morning of the fourth day the keeper encouraged us, saying, 'Try hard now. Try hard. This is the last day. I have the same road that you have. I want you to help me now through to the end—then at sundown you can eat and drink.' Toward evening he sent some women to bring water.

I looked at that water and longed for it, water hungry. Almost at sundown he took up the Taimay and put it in its sack. He took the same piece of wood or root that was used by the man who killed the bull, powdered a little piece, and put it into the water brought by the women. He said: 'Our father, the Sun, is looking down at you now. He sees you poor and hungry. He is going to help you live a long time; you are going to see your children grow up strong; you are going to have many children.' Then we drank the water and left the medicine-lodge, and the next day the village broke up and moved away.

"When a man goes into the medicine-lodge to dance he has a whistle made from the wing-bone of an eagle and some sage in his hand. I do not know why he has sage. It came to us from the Crows, who first made the Taimay. Every kind of medicine has sage with it. I think Sinday [the Kiowa culture hero] said to do that. We do not cut anybody in the Kiowa medicine-lodge: we are afraid to do that; we are afraid to see blood there. The Cheyenne, Arapaho, and Sioux cut the dancers, but we are afraid of the blood. We do not let the bull get shot through the lungs and belch blood: that would be dangerous; we would have trouble happen to us if he belched blood; we are afraid of it. Before we go into the medicine-lodge the keeper with seven or eight other men (any who wish it among the dancers) go into his tipi, take the Taimay out of its sack, fix it up, put its feather on its head, and tie it on a staff about six feet long. Then they come out, the keeper in front, the others behind in single file, the keeper carrying the Taimay by the staff in both hands in front of him. They stop behind the medicine-lodge, then go around to the left, all the time singing, and stop near the door, go four times round the lodge and then go in (it is empty when they go in), and plant the Taimay in its place in the middle and in front of the cedar screen. In old times the two little ones were planted in the same way, one on each side of the big one and all facing the east, but the Ute got these little ones. The dancers then enter, the singers with a big drum just like that little drum you have [which has but one drumhead]—only this is three feet in diameter; ten persons can drum on it at one time. Then the

spectators enter and there is a fire built a little on one side of the door. The only use for this fire is to tighten the drum head when it gets slack. When the dancers all get in they begin to dance in rows with their backs to the east, facing the Taimay. They stand in one place, bending their knees and raising their heels in time to the drum, extending their hands to and blowing their whistle at the Taimay. Behind the Taimay is a cedar screen extending across the lodge from north to south, leaving doors at each end, the butts of the cedars being out from the wall, the tops inclined against it. Above the cedars are hung the Taimay shields, eight of them. In the middle of the night the dancing stops: the singers, drummers, and spectators go home to bed—the dancers and the Taimay keeper go to sleep.


“Before sunrise next morning the drummers come in and the dancing begins again. There are four men chosen by the Taimay keeper to act for four years to assist him, to whom he teaches the Taimay ceremonies. These assistants have fans made of the tail feathers of the raven. When not in use they are kept near the Taimay. These four men go around among the dancers who rush about inside the lodge intermixed: they move these fans through among the dancers searching for the man they want. When he is found the fans are waved at him horizontally, causing him to jump into the air. Then they are swung spirally in front of him, which makes him turn around and fall down as if he were drunk. This is done three times every day—at dawn, at noon, and just before sunset. It confers long life and health on the persons to whom it is done; this is explained by the keeper when they first enter the lodge, and each time before it is done the keeper bites off some of the medicine root, the same lent the buffalo-bull killer, and* chews it up and goes around the lodge spitting it upon the dancers. This is good for them. He explains to them that he has no medicine power himself, but the Taimay sees them: it has medicine power; he himself is only a man. After the running about and [ceremonial] killing, the four men, the drummers and singers, go home to breakfast; the dancers do not eat or drink. About nine o'clock the drummers come back; the dance begins again and lasts until dinner time. A man

gets up and dances when he wants to and then sits down near the wall or behind the cedars. Just before the keeper spits on them incense is burned—cedar leaves. The dancers go around in single file, put themselves in the smoke of the cedar, one at a time, and rub their hands, arms, and bodies in the cedar smoke. They all get up and dance at the same time. Then he spits on them, they run about, and four other men are 'killed.' Then the drummers go to dinner and come back about four o'clock, when they dance again. The running about and killing of four other men is finished just about sundown, and the drummers and spectators go to supper. The dancers rest until after supper, when the drummers come back and the dancing is continued until the middle of the night. This is done every day for four days. Just before sunset on the fourth day the keeper takes the Taimay, takes off its feather, rolls it up, and puts it in its sack. He has two sacks, one for the Taimay and the articles that belong to it, and another for his rabbit-skin cap. They are made of *parflêche* just like these *parflêches* you have [to carry dried meat in], only they have a moon painted on them. When the Taimay is put away the water is brought in the vessels. As I told you before, some of the medicine wood, or root, is spit into the pails. The dancers drink very little at a time. If they drink as much as they want, it will kill them. They are allowed only a little at a time until they have got enough. Then the dance is over, and next day the village breaks up and scatters in every direction. The young men go to war against all different kinds of people,—against the Mexicans, Pawnee, or Texans.

"The Taimay keeper dances with the others, and does not eat or drink or go out of the lodge for four days. He is painted yellow all over and has a yellow deerskin skirt made of two deerskins painted yellow. He has sage tied around his wrists and holds cedar in his hand. He wears an eagle-bone whistle around his neck, has a sun painted black in the middle of his breast, another in the middle of his back, a jackrabbit skin cap with a fluffy [breath] eagle feather on his head.¹ The four assistants have each a deerskin

¹ See pl. xx, *i*; pl. xxii, *g*.

skirt painted white and wear their breech-clouts outside, a cap or wreath made of sage with a breath feather, sage tied about wrists and ankles, cedar in the hand, a scalp from one of the Taimay shields on the breast with two eagle tail-feathers attached, two moons painted blue (or green) on the skin, another scalp with feathers and

 two other blue moons painted on the skin of the back, and the accompanying design painted on the forehead and cheeks (pl. XX, *a*; pl. XXII, *f*). The dancers have no caps but paint themselves, the face and body, white, and wear their breech-clouts outside of their skirts. Each has an eagle-bone whistle. Only the Taimay keeper is painted yellow."

III. HOW THE KIOWA GOT THE TAIMAY

Taybodai (or Shank-of-a-bull's-leg), the oldest living Kiowa, now (1897) about eighty years of age, was found at Horses' Camp, and gave the following account of getting the Taimay:

"While we still lived in the far north and moved our property with dogs, the Kiowa had no Taimay, no Sun medicine.

"One time the Kiowa went to trade with the Crow and took with them an old Arapaho and his wife who lived with the Kiowa and who were very poor and miserable.

"After the trade was over the Kiowa went back. [It is not known whether this "going back" referred to their first remembered home, the "Kiowa Mountains" near the Gallatin Valley in Montana, or whether it was later in their history and they had moved down to the Black Hills of Dakota; the most settled fact in their mind was that they still carried their property by dogs.] The old Arapaho and his wife were too poor and miserable to travel back with them and they were left in the Crow village.

"After some time the Crow chief took notice of them and said: 'I see you there poor and miserable. I am going to take pity on you. I am going to give you some medicine.' And he gave the man the Taimay. After some time the Kiowa went again to the Crow village to trade and, when they left, the Arapaho and his wife went along, taking the Taimay with them, and that old Arapaho made the Sun dance with the Kiowa until he died: then some of his relations took it up.

"All the time that I was growing up that old man On-so-teen (Long-foot) had it. He was old when I saw him first, and he grew older and older as I grew up and up until his ribs collapsed and he died old, *i. e.*, he died of old age.

"He died at the Sand hills on Elk Creek the winter Fort Sill was established [1870]. He got the Taimay when he was a young man and died a very old man. He made a great many dances. The next man who took it up was Many Stars; his other name was Got-no-moccasins.¹ He made two dances, omitted the third, made the fourth, and died the following fall of a fever ('sick, hot died'). Many Stars' own brother, Many Bears, then took it up. He was a nephew of that Many Bears who was killed before by the Ute on the north side of the main Canadian where the spring is, at the mouth of the little creek. He had it four years and made four dances and then fell sick and died of a fever. After him Taimeday (Standing Taimay), his own brother, took it. Taimeday made three good dances. The time for the fourth arrived but the soldiers stopped it.² Now a woman has it, Long-foot's daughter. Her name is Ee-man-az, 'Food-giver.' Lucius Aitsans' father, Looka, knows how to make the dance. I have heard that four men got the Taimay while they were still young and died old with their ribs collapsed, and Long-foot was the fifth, whom I saw myself. They must have had it seventy years each.

"That old man's name was On-so-teen, which means 'Long-foot.' His other name was Tonanti, an Arapaho word: we do not know what it means."

IV. AGE OF THE TAIMAY

Concerning the antiquity of the Taimay we can only speculate, guided by the light of tradition checked by our earliest records. Mr Mooney thinks the Kiowa obtained it about 1765.³ The writer has long believed that sufficient time has not been allowed for the

¹ Battey, p. 183.

² The writer was with the command ordered from Fort Sill to Anadarko in the spring of 1890 at the request of Agent Meyers to stop this dance. The command included three troops of the 7th Cavalry under Lt. Col. Caleb H. Carlton.

³ 17th Ann. Rep. Bur. Am. Eth., 1898, p. 155.

sojourn of the "central group" of Dr Wissler on the Plains and for the development of their distinctive culture. For instance, it is said on the authority of the Dakota winter count that the Dakota did not discover the Black Hills until 1775 or 1776;¹ whereas, La Verendrye reports the "Gens de la Flèche Collée ó Sioux des Prairies" near the Black Hills and probably in sight of them in 1742.² (The writer has seen the Black Hills eighty miles away, towards the Missouri.)

Clark³ and others state that the separation between the Northern and Southern Cheyenne and Arapaho did not take place until about 1850, but it has been pointed out in this periodical⁴ that it was already an accomplished fact in 1816. Again Wissler says:⁵ "The general suggestion seems to be that in so far as the Plains Indians are a buffalo using people and have a culture dependent on the same, their type of civilization is of recent origin and developed chiefly by contact with Europeans, upon this assumption it appears that the peopling of the Plains proper was a recent phenomenon due in part to the introduction of the horse and the displacement of the tribes by white settlements"; and⁶ "Indeed it is difficult to see how the central groups as noted above could have followed their roving life without this animal (the horse)." Wissler appears to give but the short period from 1750 to 1800 for the development of the Plains culture, and says, "We have no information as to the ethnic conditions in this area before the introduction of the horse."

To this I disagree, for it seems very clear, from the accounts of the historians of Coronado's march,⁷ that there were roving tribes following the buffalo in the Plains of Texas in 1542 which transported their property by means of dogs and which in all probability then saw and heard of white men and horses for the first time. They had already developed the sign language of the Plains and their exterior life corresponded in every particular with the description given by the Kiowa

¹ Ibid., p. 157.

² Margry, *I écouvertes*, VI, p. 610.

³ *Sign Language*, p. 101.

⁴ *Am. Anth.* (N. S.), vol. 9, p. 545, 1907.

⁵ *Congrès International des Américanistes*, XV Sess., II, Quebec, 1906, p. 45.

⁶ Ibid., p. 44.

⁷ Winship in *14th Ann. Rep. Bur. Am. Eth.*, pp. 527, 578, 588.

of their life on the Plains of the north before the acquisition of the horse. Motolinia¹ says:

"Andando muchos días por estos llanos [east of the Pecos river], toparon con una ranchería de hasta ducientas casas con gente: eran las casas de los cueros de las vacas adobados, blancas, á manera de pabellones ó tiendas de campo.

"El mantenimiento ó sustentamiento de estos indios es todo de las vacas, porque ni siembran ni cogen maíz: de los cueros hacen sus casas, de los cueros visten y calzan, de los cueros hacen sogas y tambien de la lana: de los niervos hacen hilo con que cosen sus vestiduras y tambien las casas: de los huesos hacen alesnas: las boñigas les sirven de leña, porque no hay otra en aquella tierra: los buches les sirven de jarros y vasijas con que beben: de la carne se mantienen; cómenla medio asada . . . Tienen perros como los de esta tierra, salvo que son algo mayores, los cuales perros cargan como á bestias y les hacen sus enjalmas como albardillas y las cinchan con sus correas, y andan matados como bestias en las cruces. Cuando van á caza cárganlos de mantenimientos, y cuando se mueven estos indios porque no están de asiento en una parte, que se andan donde andan las vacas para se mantener, estos perros les llevan las casas, y llevan los palos de las casas arrastrando atados á las albardillas, allende la carga que llevan encima: podrá ser la carga, segund el perro, arroba y media y dios."

Fray Alonso de Benavides says² (1630) in regard to the Apaches vaqueros del ganado de Síbola: "Que cuando estos indios van á tratar y contratar, van las rancherías enteras con sus mujeres é hijos, que viven en tiendas hechas de estos pellejos de Síbola muy delgados y adobados: y las tiendas las llevan cargadas en requas de perros aparejados con sus enjalmillas, y son los perros medianos, y suelen llevar quinientos perros en una requa, uno delante de otro, y la gente llevan cargada su mercadería que trueca por ropa de algodón y otras que carecen." This is corroborated by Gaspar Castaño de Sosa in 1590,³ by Le Page du Pratz in 1724,⁴ and by others.

¹ *Memoriales de Fray Toribio de Motolinia*, Mexico, 1903, pp. 351-352. Compare also *Relacion del Suceso*, p. 578, and Jaramillo's narration, p. 588, *Fourteenth Ann. Rep. Bur. Am. Eth.*, pt. 1, 1896.

² *Historia de Nueva Mexico*, by Gaspar de Villagran, reprint Mexico, 1900, app. 2, p. 45.

³ *Docs. inéditos del archivo de Indias*, xv, p. 209.

⁴ *Hist. de la Louisiane*, III, p. 163, 1758.

When questioned upon the age of the Taimay and the southern migration of the Kiowa, a frequent topic of conversation in those days (1889 to 1897), Taybodal and other old Kiowa said that Tonanti was the fifth man to hold the Taimay from youth to extreme old age, each having a term of about seventy years, making no account of those who, like "Many Stars," had it for a short term only. Taybodal was mistaken, however, as to Tonanti, for we know from other sources¹ that he held it for not more than forty years. Should we allow the other four men a like period their combined terms would aggregate two hundred years from 1870, the date of Tonanti's death, thus taking it back to the year 1670. There must have been numerous short-term men scattered through their history, as happened during the twenty-seven years after Tonanti's death, for it is not to be believed that five such long-lived men would follow one another in succession in the history of any people, but of these no account is taken.

Furthermore La Salle has left us a statement² that the Gattacka and Manrhoat were south of the Pawnee in 1681. The former is the Pawnee name for the Kiowa Apache,³ who stoutly asseverate—and the Kiowa agree with them—that they migrated from the north together and have been together practically ever since. The name Manrhoat may well be, as Mooney thinks, the name of some other tribe for the Kiowa, whence it is more than probable that the Kiowa and Kiowa Apache were on the Canadian and Arkansas before 1681, wandering, as they were reported to the Secretary of War from Fort Gibson, September 15, 1835: "The Kioaways have no fixed villages but wander from the Cross Timbers on the Arkansas, Canadian and Red Rivers to the Rocky Mountains and are sometimes but not often south of Red River—signed Montfort Stokes, M. Arbuckle."⁴

In the list of Spanish documents copied by Bandelier and exhibited at the Columbian Historical Exposition at Madrid, 1892 (p. 323, No. 19), was a copy of an order of the Vicar Don José de

¹ Mooney in *17th. Ann. Rep. Bur. Am., Eth.* p. 241.

² Margry, *Découvertes*, II, p. 201.

³ Mooney, *op. cit.*, p. 248.

⁴ Transcript Sup. Ct. Record, U. S. vs. Choctaw, Chickasaw, etc., p. 138.

* Bustamente to Father Fray José Antonio Guerrero, Minister at Santa Fé, to marry a Panana (Pawnee) Indian to a Cargua woman, both servants. This is from the Archives of the Parish of our Lady of Guadalupe of Paso del Norte, Mexico, 1732, and Document No. 20 is a copy of their marriage notice.

Another fact bearing on this subject is that the Kiowa have lived so long south of the Pawnee that they call the north star the "Pawnee star" and assert that the Pawnee towns were right under that star, for in following the Pawnee horse raiders they would always follow their trail by day, and when prevented by darkness they could always keep on all night toward the north star, and be sure of picking up the trail in the morning. As the Kiowa Apache stoutly support the Kiowa in declaring that they got the Taimay in the north before their southern migration together, it follows that in all probability they had already acquired it previous to La Salle's statement of 1681, and the chronology of Old Taybodal may not be far wrong.

V. TABUS, OR "WHAT THE SUN DANCE SHIELD KEEPERS ARE AFRAID OF"

"That old man An-so-teen (Long-Foot) gave them Taimay shields and told them what to be afraid of. He died about 1870, very old. He had had the Taimay since he was a young man. The Taimay shield keepers are afraid to look at themselves in a glass; if they do their eyesight will be ruined. They must not eat buffalo hearts, or touch a bearskin, or have anything to do with a bear; they must not smoke with their moccasins on, or kill, or eat any kind of rabbit, or kill or touch a skunk.

"Bird shield keepers must not touch birds nor throw feathers into the fire nor put a knife in the fire in a tipi; if you cook something for them and the knife touches the fire they will not eat what you cook for them. They must not eat a heart of any kind. You must not cook a heart in such a man's kettle. His wife and children must not eat a heart or any kind of bird because he keeps a bird shield. Santanta had a crane shield. You know about that: you have that shield yourself. Every shield keeper is afraid of something

[i. e., has tabus]. The buffalo shield keeper is afraid of raw liver or anything raw from the inside. He is afraid of putting a buffalo horn into the fire in his tipi. He is afraid to take a pipe-stem above, always takes it below your hand. That is his road. He may be afraid of other things too."

VI. CONCLUSION

It is only when studied in connection with the spring festivals of other peoples that the Sun dance of the Plains Indians is seen in its true light. It then takes its place at once among its kindred phenomena as one of a world-wide series of religious dramas, symbolizing the regeneration of life. It is the worship of the Sun Father whose symbol in the countries of the Old World has been the "phallus," giving rise to its designation as a "phallic cult."

To the Indian the winter is a season of old age or death, all vegetation that produces life is old and worn out or dead; but when the sun shines warm in the spring, the rains come down from above and fertilize the earth, the grass upon which the animals feed comes to life and springs up from the ground, the buffalo drop their calves, the birds and fish lay their eggs, then all nature rejoices in a new birth. The Above Father (the Power in the Sun) has brought this about in conjunction with "Our Mother the Earth." The Indian believed in the dualism of nature, that there can be no birth without sexual intercourse, without sacrifice and suffering, and the acts of the Sun dance symbolize these or relate to making plenty the buffalo upon which they lived.

Every step of this ceremony he regarded as pure and holy, and in following it out the Indian was as sincere and reverent in his worship as any churchman of our time.

Some of the acts observed, as those related by G. A. Dorsey in the case of the Lodgemaker's wife and the High Priest in the Cheyenne and Arapaho Sun dances,¹ have shocked those who have not looked beneath the surface, remembering the stage of culture in which we found the Indian and through which our own forefathers have passed.

¹ *Field Columbian Museum Publication* 103, p. 131, and no. 75, p. 172.

To properly understand this we must compare the history of other primitive peoples in different parts of the world, keeping constantly in mind the difference between the world of myth and fancy inhabited by the Indian and that which we call the world of reality. We must remember that the acts we complain of were commanded by his religion, which was handed down to him by his forefathers, and that, in his mind, upon the proper observation of its rites and ceremonies depended the life and prosperity of his people.

We shall then be able to consider these acts, not with the horror that would naturally be called forth by similar acts today among our own people, but with kindly tolerance as part of the religious culture of the bygone age to which they really belong, when man, creeping slowly upward from the brute, had not yet attained to higher things.

We shall be assisted to this view by a reference to the account of Herodotus of what was done in the name of religion in the temple of Mylitta in Babylon nearly five hundred years before Christ by a people undoubtedly as sincere as we are, and the following references will further broaden our vision as to the extent covered by the worship of the Sun and Earth as our parents.

16th Century. The Florida Indians "have no knowledge of God nor any religion saving that which they see as the Sun and Moon."¹ "It is to be noted for a general rule that these people in all the continent of these Indias from the farthest parts of New Spain to the parts of Florida and farther still to the Kingdoms of Peru had, as has been said, an infinity of idols that they reverence as Gods, nevertheless above all, they still held the Sun as chiefest and most powerful.² Chichimecs and Aztecs, likewise Comanches,³ use the Sun and Earth as mediators.⁴ Nezahualcoatl recognized the Sun as his father and the Earth as his mother."

1630. Apaches of the Rio Grande. "Dijo asi: 'Padre, hasta

¹ French, *Hist. Coll. La.*, 1869. History of the first attempt of the French to colonize the newly discovered country of Florida, by René Laudonnière, pp. 165-362.

² Acosta, p. 334, quoted in Bancroft, *Native Races*, III, p. 194.

³ *Ibid.*, p. 170.

⁴ *Ibid.*, p. 193.

ahora no habíamos conocido otro bienhechor tan grande como el sol y la luna, porque el sol nos calienta y alumbra de día y nos cría las plantas, y la luna nos alumbra de noche; y así adorábamos á estos dos como á quien tanto bien nos hacía, y no sabíamos que había otra cosa mejor."¹

1680. "Indians of the Mississippi had a particular veneration for the Sun which they recognize as him who made and preserves us."²

1699. "The Hurons believe as well as the Nachez that their hereditary chiefs are descended from the Sun."³ The Detroit Indians "Priat le soleil."⁴

"Shakuru, the Sun, is the first of the visible powers to be mentioned. It is very potent; it gives man health, vitality, and strength. Because of its power to make things grow, Shakuru is sometimes spoken of as atius, father."⁵

That this reverence for the Sun may be shown not to have been confined to the New World or to a recent period we mention the account of Herodotus⁶ of the interview of Queen Tomyris of the Massagetæ, nearly five hundred years before Christ, with Cyrus the Great, to whom she said: "But if thou wilt not do so, I swear by the Sun, the Sovereign Lord of the Massagetæ, that thirsty though thou be, I will satiate thee with blood." Again, "of all the Gods, they adore the Sun alone to whom they sacrifice horses."⁷ Further information on this point has been gathered by Dr E. B. Tylor in his *Researches into the Primitive Culture of Mankind*,⁸ where he gives the statement of the treaty oath between Philip of Macedon and the general of the Carthaginian Libyan Army, where they invoked the Sun, Moon, and Earth among other Gods, to its sacredness. And the Brahman makes the following prayer to the Sun: "Oh Sun God! you are Brama at your rising Rudra at noon and Vishnu at

¹ Benavides, in Villagran, op. cit., pp. 35-36.

² Father Membré in *Hist. Coll. La.*, part IV, p. 182.

³ Charlevoix, in French's *Hist. Coll. La.*, 1851, p. 162.

⁴ Margry, *Découvertes*, v, p. 115.

⁵ Miss Alice C. Fletcher, The Hako Ceremony, *22d Rep. Bu. Am. Eth.*, pt. 2, p. 30.

⁶ P. E. Laurens' translation, Oxford, 1827, vol. 1, p. 94.

⁷ *Ibid.*, p. 95.

⁸ Vol. II, p. 301.

setting; you are the jewel of the air, the king of day, the witness of everything that takes place on earth; you are the eye of the world, the measurer of time; you order the day and night, the weeks, the months, the years, deign in your mercy to put away all my sins." ¹

The idea of the "Earth Mother" is further elaborated by Tylor.² "In Barbaric theology Earth is the mother of all things. No fancy of nature can be plainer than that the Heaven Father and Earth Mother are the universal parents." And Tylor quotes³ in support of this the Aztec prayer to Tezcatlipoca: "Be pleased oh, our Lord that the nobles who die in war be peacefully and joyously received by the Sun and Earth who are the loving Father and Mother of us all." Lastly he says:⁴ "Among the Aryan race there stands wide and firm the double myth of the two great parents, as the Rig Veda calls them; they are Dyaus Pitar, Zeus Pater, Jupiter, the Heaven Father and Prithivi Matar the Earth Mother." The same belief is held⁵ in China, Polynesia, Peru,⁶ among the Caribs,⁷ and Comanche. Many other examples could be cited, but nowhere has the writer seen the whole matter summed up as well as in *Sex Worship*, by Clifford Howard,⁸ from which the following extracts are taken:

"No subject is of greater importance and significance in the history of the human race than that of sex worship, the adoration of the generative organs and their functions as symbols of the procreative powers of nature. It was the universal primitive religion of the world and has left its indelible impress upon our ideas, our language and our institutions. . . . It [phallic cult] was the worship inspired by the phenomena of nature in her great mystery of life, and while its resultant mythologies and attendant ceremonials were carried and adapted from one nation to another, it had numerous independent originations; for the human mind,

¹ *Hindu Man., Cus. and Cer.*, Abbé Dubois, trans. Henry K. Beauchamp, Oxford, 1899, p. 245.

² *Anthropology*, p. 359.

³ *Anthropology*, p. 327.

⁴ *Primitive Culture*, I, p. 327.

⁵ *Ibid.*, p. 325.

⁶ *Ibid.*, p. 326.

⁷ *Ibid.*, p. 327.

⁸ Published by the author, Washington, 1897

as a whole, is always affected in the same way under similar conditions, and the wondrous phenomenon of procreation has ever aroused in primitive man a deep and religious reverence for the animating powers of life.

"While the highest development of phallicism was reached by the ancient Egyptians, Hindoos, Assyrians, Greeks and Romans, whose records and remains abound in evidence of the phallic basis of their elaborate mythologies and religious celebrations, the existence of this early form of religion is to be found in every part of the globe inhabited by man. Babylon, Persia, Hindustan, Ceylon, China, Japan, Burmah, Java, Arabia, Syria, Asia Minor, Egypt, Ethiopia, Europe, the British Isles, Mexico, Yucatan, Peru and various other parts of America—all yield abundant evidence to the same effect and point to a common origin of religious beliefs.

"It must not be imagined, however, that phallic worship is a religion belonging entirely to the past ages. It is common among primitive races among all parts of the world today; and in India, where this form of religion has existed uninterruptedly since its foundation, thousands of years ago there are upwards of one hundred million true phallic-worshippers. Among the Zuñi and other North American tribes phallicism enters into a number of their religious ceremonies, while the natives of the Pacific islands and certain parts of Africa are most ardent devotees in the worship of the procreative functions, and exhibit their religion in the realistic and unequivocal manner of primeval naturalness [pp. 7-9].

"But foremost among all natural emblems of the creative deity was the sun; nay, the sun was the Creator himself, the Almighty God. It was he who gave light and life to the world; upon him all existence depended. Osiris dwelt in the Sun as the Omnipotent Creator, and through this all-potent medium manifested his powers to mankind. All of the ancient supreme gods were closely allied with the sun. It was either the Deity himself or his glorious and almighty manifestation. The worship of the sun, therefore, necessarily formed a part,—a very important and significant part,—of phallic worship. In the adoration of the sun as the Creator and Preserver of mankind lies the origin of a universal theological belief [pp. 75-76].

"This divine, actuating force of nature owed its sacredness to the fact that it was the necessary and inciting means to the accomplishment of the supreme life-purpose of man and woman—the union of the two for the reproduction of life and the perpetuation of the race. It was in the gratification of the Divine Passion that man experienced his most exalted pleasure, and beheld the direct and immediate cause of a new being and

the immortality of life. Hence, the act of generation . . . was regarded as supremely sacred and divine. It was the sublime means ordained by the Creator for the fulfillment of his infinite purpose, and . . . was regarded as a most holy act and was the object of universal worship and devout, religious rites [pp. 130-131].

"The mysteries of Isis and Osiris, of Egypt, the mysteries of the Babylonians, the Eleusinian mysteries of the Greeks, the mysteries of Bacchus and Venus at Rome, together with many others of lesser importance, were all festivals in celebration of the new-born life and the regenerative union of the creative elements of nature. They all set forth and illustrated by solemn and impressive rites and mystical symbols the grand phenomena of nature in its creation and perpetuation of life. In the Eleusinian and Bacchanalian mysteries "the gravest matrons and proudest princesses apparently laid aside all dignity and modesty, and vied with each other in revelry. . . . And these enthusiastic devotees willingly gave themselves up to the embraces of the no less enthusiastic worshippers of the opposite sex, in the nocturnal ceremonies, that had for their object the glorification of the deity in the divine act of generation [pp. 158-160].

"The Liberalia, the Floralia, and the festival of Venus were popular vernal festivals celebrated by the Romans in honor of the procreative deities and their vitalizing function. . . . These springtime festivals, in celebration of the resurrected life and the generative powers of nature, were common among all nations from the earliest times, and it is in some of the particular forms of these celebrations that we find the origin of our own joyous festival—Easter [pp. 162-163].

"It matters not to what race nor to what age we turn, we ever find the same reverent regard for the regeneration of life. Through all the myths and ceremonials of the world, however extravagant or inconsistent many of them may appear, we trace the constant aim of mankind to glorify the Creator and to honor him by the celebration of rites and festivals demonstrative of the adoration of mankind for his supreme powers, wisdom and goodness, while beneath them all lies the universal actuating reverence for the great and unsolvable mystery of procreation—the foundation of all religious worship" [p. 166].

WASHINGTON, D. C.

PHONETICS OF THE MICRONESIAN LANGUAGE OF THE MARSHALL ISLANDS

BY A. L. KROEBER

A PHONETIC survey of a number of American Indian languages recently carried on at the University of California revealed certain features common to a number of these tongues that in other respects are distinct. Particularly the stopped consonants are in many cases characterized by being organically only one at each point of articulation, and differentiated according to position in the word. Those that precede vowels are in many languages neither wholly surd nor wholly sonant but "intermediate." The author's record some years ago of a number of words from the dialects of Mortlock and Ponape in the Caroline Islands showed so great an inconsistency in the writing of surd and sonant stops as to force the suspicion that an analogous situation existed in these languages, in that there might be only one series of intermediate stops. The Polynesian languages possess only one class of stops, indicating the possibility of a further case of the occurrence of intermediates; and this is rendered more probable on account of the occasional employment of sonant stops in the early writing of these tongues, whereas the modern standardized orthography recognizes only surds. Compare taboo and tapu.

The arrival at San Francisco in April 1911 of the German trading schooner *Triton*, with a crew of Marshall Islanders, furnished an opportunity to ascertain whether this phenomenon of intermediates, or any others of a similar nature, extended to other regions than the western part of North America. Through the courtesy of Captain Othmer, the desired work was made possible. The *Triton* remained in the harbor only a short time, and the crew was generally needed for work about the vessel. The opportunities for study were therefore limited; but the willingness of several of the natives, especially of Hans Taramij, made it possible to obtain information as to some of the principal phonetic features of the language.¹

¹ The *Triton* was lost within twenty-four hours after sailing from San Francisco. The entire crew returned safely in a life boat. The author's informants, however, had deserted before the vessel left port.

As Father B. A. Erdland's dictionary and grammar of the Marsh-all dialect, which were published in 1906 as the fourth volume of the *Archiv für Deutsche Kolonialsprachen*, are based on a far more extended acquaintance with the language than the author could hope to attain, it was decided to devote the available time to mechanical experiments, which do not appear to have been made for any Micronesian or in fact any Malayo-Polynesian language. The apparatus consisted of needles attached to rubber diaphragms at the end of tubes, inscribing on smoked paper covering a revolving drum. About four hundred tracings were secured simultaneously from mouth and throat, nose and throat or mouth and nose, or from the mouth alone. A selection from these is reproduced in the appended plates.

Father Erdland's orthography, while perhaps not above criticism on theoretical grounds, seems to be practically satisfactory, as he appears to have distinguished all the sounds of the language and to have represented them consistently. His choice of characters has therefore been followed here. That his description of the sounds is somewhat incomplete, certain of the most remarkable phenomena not being mentioned, is not surprising, as many of these traits are so unusual as to be possible of detection only by a practiced phonetician or through laboratory facilities.

VOWELS

Tracings of vowels do not lend themselves readily to analysis. A few aural impressions may therefore be in place. Erdland gives the vowels as i, e, a, o, u, with the additional umlaut qualities ä, ö, ü. Two mixed vowels of ö and ü type certainly occur; but they are considerably different from close and open ö and ü of German. The sound ä is of another character, being essentially an open e. O has two qualities, the more open of which is distinguished by Erdland as ô. Thus tô, rope, nearly like English taw. The other o is closer, but probably not so much so as in English or German "so." Its quality is probably between that of open and close o in most west European languages. The relation of ä and e seems to be parallel to that of ô and o. For i and u a similar distinction was not observed: each seemed to be, analogous to

o and e, midway between the close and open qualities of the same sound as spoken by Europeans.

All initial vowels were generally heard with a preceding aspiration. This is weaker than English h, and has not been recorded, or at least not written, by Erdland. As it is the normal approach of every initial vowel, its orthographic designation is perhaps unnecessary. The natives accept either *hemen* or *emen* as correct renderings of their word for four; probably 'emen comes nearest a true representation. In the tracings the aspiration usually shows as a slight rise preceding the voice vibrations of the vowel. That at times it does not thus appear is probably due to the weakness of the sound.

It will be seen that initial voiced consonants in Marshall normally begin with a flow of surd breath; that is to say, sonancy commences only some time after the sound is under way. The aspiration of initial vowels is evidently only part of the same tendency.

W, pronounced as in English, according to Erdland, did not appear in the words observed by the writer.

STOPS

Stopped consonants are formed in three positions, corresponding to p, t, and k. T is dental. K is more forward than in most American Indian languages, which on the whole form the sound farther to the rear than English, German, or French.

The character of the stopped consonants differs radically according to their position in the word, at least as much as has been noted in any American language.

In initial position it was found that sonancy regularly commenced a very short time, averaging probably less than a twenty-fifth of a second, after the beginning of the explosion. This is exactly the condition ascertained for most of the languages of California. In short, the Marshall initial stops are intermediate between true surds and true sonants, the occlusion and beginning of the explosion being unvoiced, the greater part of the explosion voiced. After its first inception, the voicing increases very rapidly, reaching a maximum, which surpasses the strength of the voicing of the fol-

lowing vowel, within a very few hundredths of a second. In most American languages, the commencement of the vibrations of the vocal chords in intermediate stops presents a different character in tracings: the needle connected with the throat drops a short distance, indicating a slight retraction of the surface of the larynx, and at the same time the vibrations begin to appear, increasing in strength more gradually than in the Marshall records. Otherwise the sounds seem identical in the two groups of languages.

As regards strength of explosion, the Marshall initial stops resemble European surd stops, though they lack any sustained aspiration or rush of breath.

Erdland, while denying a *p*, writes both *t* and *d*, *k* and *g*. After a little familiarity with native words, these sounds are usually recognizable as distinct, though they are far less different than in English. An examination of tracings of words commencing with *t* and *k* as compared with *d* and *g* however fails to show any difference between the two classes as regards either duration or strength of sonancy, force of explosion, or continuance of aspiration. But, strange to say, it was discovered that in words written by Erdland with an initial surd stop, the occlusion is normally somewhat longer than in those of which the first sound is represented by a character for a sonant stop. This difference is clearest for the dentals. In "d" the occlusion is almost always less than a fifth of a second; in "t" it lasts from a fourth to a third of a second. For "g" and "k" the observed difference is not so pronounced, but the average duration of the occlusion in the former sound runs somewhat below and of the latter above a fifth of a second, corresponding to tracing lengths of respectively less and more than a centimeter. It is remarkable that two sounds that appear to be identical except for this difference in duration of occlusion should to the European ear give somewhat the effect of sonant and surd stops.

In *medial position*, at least between vowels, the sounds written as stops by Erdland were usually heard and always observed as fricatives, and generally voiced. The tracings present a marked dip, though without the definite vertical and horizontal contour of stops. The voice vibrations usually show through the whole period of the sound both in the mouth and the throat record, though

in some instances enough of the original stop character, with its surd occlusion, remains for at least part of the fricative to be unvoiced.

A similar tendency toward the substitution of fricatives for stops was at times noted in initial position, though less regularly than medially, and usually confined to the explosion. That is to say, such modified initial sounds usually show at least some remains of an occlusion, but the curve for the explosion is that of a fricative instead of a stop. They are probably not mere affricatives, as tracings of these normally present the character of stops. This fricative quality of initial stops was sometimes also perceived by the ear; and, in their imperfect rendering of English, the natives employ initial stops and fricatives almost indiscriminately. Thus "flenty" for plenty, but "pish" for fish; "thongue" for tongue; and either "shome" or "djome" for some.

Final stops possess a firm occlusion, but no perceptible explosion from the mouth. The lips or tongue make a closure which is either indefinitely sustained or concluded after the breath pressure necessary for speech has ceased. Hence final stops are very faint to the ear. Bād, smoke, is not quite bāt and almost bā; "Gilbert" is either kilua or kiluat. In some cases a distinct explosion through the nose was observed, and a tube from the nostril to a flame usually showed a puff when the explosion would be expected in an English stop. Many tracings from the nose however reveal no explosion whatever; so that it is possible that the nasal explosion is due merely to an occasional unintended opening of the naso-oral passage before the release of the mouth closure and cessation of breath pressure. If the sounds are essentially nasal stops, they differ from m, n, and ñ in that they possess an occlusion which is complete for nose as well as mouth. They certainly do not markedly resemble final nasal continuants, although these, like final stops, are entirely surd in the Marshall dialect.

Erdland writes both d and t, but only b and k, at the end of words. As in the case of initial stops, these show no difference in point of sonancy, which, as just stated, is completely lacking. It seems that there may be a longer occlusion for t and k than for d and b, just as when they are initial; but this is not certain, as

the end of the occlusion is discernible in but very few tracings.

Stops closing syllables that precede a consonant are treated as final. In *bödökdök*, blood, the first *k* is of final quality, the following *d* initial, and only the first *d* of medial character. Erdland says that in such words the final surd stop of the first syllable often becomes sonant—and presumably fricative—and is followed by a vowel. In conformity to this statement, *nugenuk* and *bödögödök* were sometimes heard instead of *nuknuk* and *bödökdök*; but the majority of tracings do not show the change.

NASALS

The nasal continuants, *m*, *n*, *ñ*, correspond to *b*, *d*, *g* in position of articulation. They also resemble the stops in being at least partly voiced when initial, formed with imperfect mouth closure when intervocalic, and entirely surd when final. Initial sonancy commences gradually and some cases were observed where it seemed to begin after mouth closure, so that the first part of the sound would be surd. Medial nasals are heavily voiced, and, as the vibrations show in mouth tracings, it appears that the mouth is closed imperfectly. The metal mouthpiece employed has been found by the writer to interfere at times with tight lip closure after a wide vowel, so that an effort at clear enunciation is often necessary to produce a true closure effect for medial *m*. In the Marshall tracings, *n*, to which this defect of the apparatus would not apply, is, however, recorded as voiced from the mouth as well as *m*, and medial *m* shows much heavier vibrations than those occasionally traced in English words: so that it is clear that the typical intervocalic nasals in Marshall are made with very loose contact of the mouth parts. The surdness of the final nasals is usually complete; sometimes the voice of the preceding vowel continues to die away in the first part of the succeeding nasal. This is a phenomenon that has been observed in several American languages.

It is obvious that the difference shown by stops and nasals, according as they are initial, medial, or final in Marshall, does not point to so many organically distinct classes of sounds, but to a single sound of each type which becomes radically modified according to its position in the word.

P. Paulinus (*Anthropos*, v, 809-810, 1910) has described not only p, t, and k, but m, n, l, f, and th as occurring in the Micronesian dialect of Yap, in the Caroline Islands, with accompanying glottal closure. The effect of some of these sounds must resemble somewhat that of the final stops and nasals of the Marshall dialect, but neither observation nor mechanical records have given any indication of glottal affection, nor of independent glottal stops, in this dialect.

AFFRICATIVES

Erdland writes j with the value of English j, that is dj. This affricative was found to agree exactly with the stops in its essential features. It is "intermediate" as to sonancy when initial, surd and without explosion when final, and frequently with slurred occlusion and explosion, that is, an approach to fricative quality, when intervocalic. The average length of the occlusion in initial position is less than a fifth of a second (9 mm.), and thus of the "d" rather than "t" type.

Marshall j corresponds to usual Malayo-Polynesian t or s: jilu, three, tol; meja, eye, mata; lo-jiliñö, ear, teliña; juon, one, sa.

LATERALS

Erdland distinguishes two l sounds, l and l. In regard to the latter he says that it sounds "als ob ein l anklingt dem ein nachdrücklicheres in Verbindung mit dem folgenden Vokale folgt." The difference between the two sounds is difficult to perceive, and tracings of them are similar. Both are voiced. Records of both show a drop or dip near the beginning of the sound. English medial l usually begins with a drop and ends with a sudden short ascent. It is thus registered at a lower altitude than the adjacent vowels, no doubt because the partial closure of the mouth by the tongue permits the escape of less breath. In most American languages, on the other hand, tracings of l regularly commence with, and often largely consist of, a single marked dip, that is to say, a prominent drop and quick recovery. The cause of this form of record is unexplained, unless it is due to a more sudden lateral movement of the tongue than in English. Marshall l and l are intermediate between the English and American Indian types, both forms having

been recorded. Erdland suggests that *l* may be analogous to *r*, which appears to be a stopped sound. No trace of an occlusion was however found in any tracing of *l*, so that this supposition does not seem probable. When *l* and *l* are initial, tracings show a regular rather slow rise of the breath pressure for some time before sonancy sets in. Final *l* and *l* seem to begin as sonants but to lose their voice before completion.

Both Marshall *l* and *l* seem to correspond to Malayo-Polynesian *l-r*: *lo*, tongue, *lida*, arero, *lapi*; *al*, sun, *alo*, *ari*.

TRILLS .

Erdland recognizes also two *r* sounds, *r* and *r*, which proved to be somewhat easier to distinguish than *l* and *l*. In regard to *r* he says: "Die Zungenspitze steht beinahe gegen das Zahnfleisch. Die dann durch die Enge getriebene Luft bringt den *r*-Laut hervor. Es scheint falsch zu sein, diesen Konsonanten als ein *r*, dem ein *d* vorklingt, zu bezeichnen." The last statement may be contested. The sound *r* was first written *dj*, then *j*, *r*, or *dj*, and until the last it continued to give the effect nearly of *dr*. Unfortunately it was recorded only in initial position, but there normally shows a definite occlusion. That in some cases the tracing of this occlusion is much rounded, indicating slurring of close stoppage of the breath, is a feature shared by this sound with all other stops, particularly *b*. Sonancy also begins at the usual point, namely a small fraction of a second after the beginning of the release. The duration of the occlusion varies from an eighth to a third of a second; the average is about a fifth, so that it is difficult to assign *r* to either the "t" or "d" type of stops. It is, however, true that tracings of *r* differ from those of other stops in that the line of the explosion does not immediately run into the vowel vibrations, but is followed by a gradual rise, or even a drop and a rise, which may contain three or four oscillations of the kind usually found in *r* tracings and due to flaps of the tongue. The sound may therefore be defined as an alveolar stop with a continuant release of more or less *r* quality.

This sound, in spite of its stop character, seems to be a development from original Malayo-Polynesian *r*: *ri*, bone, *suri*; *ren*,

water, rano (Madagascar, Motu), tanu (Rotuma), tun (Santa Maria).

The other *r* presents no anomalies except in initial position, when the "trill" vibrations which one should expect are normally absent. Instead there is a surd breath approach to the voicing, much as in the case of Marshall *l*. When intervocalic, *r* regularly shows three to four distinct voiced trills or flaps of the tongue; in the one set of records obtained of a word in which it is final, the flicks are regularly six in number and apparently surd, as the mouth tracings show no voice vibrations, and simultaneous glottal records happened not to be secured.

SUMMARY

It is clear that the character of Marshall consonants is greatly affected by their position in the word. With the exception of *l*, and possibly *l*, *r*, and *r*, all final consonants are entirely surd, and even in these laterals and trills the voice fades away before the breath pressure and articulation cease. All medial, that is intervocalic, sounds are sonant. All initial consonants begin as surds, though as they approach the vowel they are invariably voiced. In the case of stops this means that the occlusion is surd, at least the last part of the explosion sonant; in the case of continuants, that there is some flow of breath before the voicing sets in. It is also clear that the nature of the consonants is determined by the following rather than the preceding vowels, that is to say that *k* leans upon *a* more in *ka* than in *ak*. This is shown by the fact that finals are entirely surd, initials partly sonant, medials entirely sonant.

In all essentials, these phonetic traits are duplicated in the Pima-Papago language of Arizona, and several individual features recur in a number of American languages; but, as regards the allied tongues of Malayo-Polynesian stock, the Marshall dialect seems to be phonetically greatly specialized.

TABLE OF SOUNDS OF THE MARSHALL LANGUAGE

Vowels (with *h* approach when initial):

Open: *a*

Open: *ä*, *ô*

Medium close: e, o

Medium close: i, u

Mixed, of indistinct quality: ö, ü

Semivowel: w

Consonants (x-, initial; -x, final; -x-, intervocalic):

	Labial	Dental	Alveolar	Post-alveolar	Lateral	Palatal
Long surd occlusion, sonant explosion		t-				k-
Short surd occlusion, sonant explosion sometimes fricative	b-	d-	r-	j-		g-
Fricative, usually sonant, no true occlusion	-b-	-d-, -t-		-j-		-g-, -k-
Surd occlusion, no release through mouth, possibly through nose	-b	-d, -t		-j		-k
Nasal continuant with mouth closure and gradual voicing	m-	n-				ñ-
Sonant nasal continuant with imperfect mouth closure	-m-	-n-				-ñ-
Surd nasal continuant with mouth closure	-m	-n				-ñ
Continuant, gradually voiced				r-	l-, /-	
Sonant continuant, 3-4 tongue trills				-r-		
Continuant, probably surd, 6 tongue trills				-r		
Sonant continuant					-l-, -/-	
Continuant, beginning sonant, ending surd					-l, -/	
-r and -r- occur but their character has not been determined.						

EXPLANATIONS OF PLATES

The appended reproductions of tracings were simultaneously recorded from the throat and mouth (pls. xxv, xxvi), throat and nose or nose and mouth (pl. xxviii), and from the mouth alone (pl. xxvii). The vertical lines have been drawn to connect synchronous points in two tracings. In some cases, these also separate constituent sounds of the word; but their primary purpose is the indication, on the lower breath or nasal line, of the point corresponding to a change in sonancy, as

revealed in the throat line above. Such changes may or may not be equivalent to the transitions from one sound to another. It must also be observed that the vertical lines actually denote temporally coincident points in the two lines only when the lower tracing is near its base-level. As the mouth or nose line becomes considerably elevated owing to stronger breath pressure or impounding of the breath in the apparatus, the correspondence indicated by the vertical line is more and more lost, because the inscribing needle, being attached at one end, describes an arc instead of vertical strokes. In a high mouth or nose tracing, therefore, a point some distance to the right of the base of the vertical line corresponds in point of time to the point marked by the intersection of this vertical line with the upper or throat line.

Explanation of Plate XXV.

(Tracings from mouth below, from glottis above)

Fig. 1.—*dil*, louse nit. D with short occlusion, as in figure 2, as compared with the long occlusion of t in figures 3 and 4. L commences with a conspicuous dip, as in many American languages.

Fig. 2.—*dol*, mountain. L shows but a slight dip, as in European languages. As between this word and *dil* of the last figure, the l in the latter is regularly marked by a deeper dip in all the tracings obtained.

Fig. 3.—*tô*, rope. T with a long occlusion; beginning of sonancy marked by a drop in the glottal tracing—an American characteristic, unusual in Marshall.

Fig. 4.—*tô*, sugar cane (long open o). The inception of sonancy is of the normal Marshall type, to which figure 3 furnishes an exception.

With figures 1 to 4 compare figure 26.

Fig. 5.—*reb*, a worm. R has a clear occlusion, but the release from this is followed by a fricative sound of some duration, which is first surd, then sonant, and shows one or two waves of r type.

Fig. 6.—*gögō*, a species of fish. Initial g of stop type, with short occlusion; medial g a voiced fricative.

Fig. 7.—*gilgil*, a species of fish. The first g is of normal initial type, with short occlusion. The unvoiced middle portion of the glottal line and simultaneous dip in the mouth line probably mark the surd end of the first l and beginning of the second g.

Fig. 8.—*körä*, woman. K is of normal type, with heavy voicing at the end of its explosion. R shows three or four tongue movements, which appear even in the glottal tracing above.

Fig. 9.—*marok*, darkness. M becomes sonant very gradually, probably some time after closure of the lips; a shows a wavering in force of breath that is frequent in many languages in vowels preceding r or l; r has about four trills, and is less strongly voiced than either vowel; o reveals an increase in strength of sonancy toward the end that often appears immediately preceding a final surd stop, such as the following k, which does not show in the tracing.

Fig. 10.—*ruo*, two. R begins surd, but quickly reaches maximum sonancy, whereupon its tracing runs into that of the vowels. The r is without tongue flaps. This trait is normal in initial position.

Explanation of Plate XXVI.

(Tracings from mouth below, from glottis above)

Fig. 11.—*kenuam*, your neck. K of usual type, including heavy voicing of explosion; n is formed with imperfect tongue-teeth closure, as voice vibrations appear in the tracing from the mouth as well as from the throat; u and a can not be separated; m is voiceless.

Fig. 12.—*gaṅgūn*, a species of fish. The second g, as it follows a consonant, is of initial, not medial, type; the *n̄* of the preceding syllable, being final, is surd and therefore coincides with the occlusion of this g.

Fig. 13.—*bödödök*, blood. Probably *bödögödök* was actually spoken. The maximum strength of voice is reached during the last part of the explosion of the b. The three dips in the breath line, all sonant in the upper glottal line, represent intervocalic d, g, d. Final k does not show. Compare the following figure.

Fig. 14.—*bödödök*, blood. B has only a vestige of an occlusion, but the place of its explosion is taken by a long surd fricative. Medial d is also, and exceptionally, surd; its definite explosion shows it to have been spoken as a stop of initial type rather than a fricative of the normal medial kind. K is not indicated other than by the short surd descent of the line from the conclusion of the second vowel, but this brief voiceless period suffices to allow the following d to be of regular initial stop type. Final k as usual is merely a surd closure and therefore does not show. The greater length of this tracing is due to unusually slow speech; evidently the informant was not only lengthening his vowels but syllabifying the word and speaking with greater distinctness of articulation than is normal.

Fig. 15.—*jilu*, three. The contour of the j is rounded, indicating some slurring of stop quality in the direction of fricative character. L in the breath line is depressed below the contiguous vowels, but without a sharp dip at the outset, and therefore of European rather than American Indian type. Compare figures 16 and 28.

Fig. 16.—*jilu*, three. J is of the usual stop type; l consists of a marked dip, due to momentarily decreased flow of breath; it is more heavily voiced than the adjacent vowels.

Fig. 17.—*bād*, smoke. B has a definite occlusion and release, but these are followed by a surd continuant. Pf was therefore probably spoken. The upcurve of the breath line at the extreme right may be the slight explosion caused by the release of the tongue from the teeth at the end of the d. Contrast the following figure.

Fig. 18.—*bād*, smoke. The maximum voicing occurs at the very end of b and at the end of ā or first beginning of d, which is otherwise surd.

Explanation of Plate XXVII.

(Tracings from the mouth)

Fig. 19.—*bā* or *pā*, hand. B has become a pure surd fricative, namely f.

Fig. 20.—*rī*, bone. R here is a stop, but followed by a continuant release which soon becomes sonant and marked by a series of tongue flaps.

Fig. 21.—*ôdr*, beg (long open o). The first trill or two of the final r show indication of voicing; the others are surd.

Fig. 22.—*lôjïöm*, your belly (long open o). L shows much the character of *l* in figure 23; medial *j* and final *m* of usual type.

Fig. 23.—*löl*, rotten cocoanut. The short voiced elevation near the middle of the word probably represents the vowel. The preceding and succeeding *l*'s then are both sonant in that part of their duration nearest the vowel, but surd farther away from it.

Fig. 24.—*raj*, whale. R begins surd, becomes suddenly sonant, and at the very end is marked by one or two tongue flaps. The final stop as usual does not show.

Fig. 25.—*rägä*, stone. In this tracing *r* is a continuant without trace of stop quality; like the *r* of figure 24, it begins surd and ends with a few voiced trills. G, as usual medially, is a voiced fricative.

Fig. 26.—From above down: *dol*, mountain; *dil*, louse nit; *tô* sugar cane (long open o); *tô*, rope. Illustrating the difference in length of occlusion for "d" and "t". Final *l* in both *dol* and *dil* changes from sonant to surd. Compare figures 1 to 4.

Explanation of Plate XXVIII.

(Figures 27 to 29, from Peter Luwilung: glottis above, nose below. Figures 30 to 34, from Hans Taramij: nose above, mouth below.)

Fig. 27.—*juon*, one. The affricative *j* shows a flow of air through the nose; this terminates at the moment of sonancy, i. e., with the mouth explosion. The naso-oral passage is therefore not tightly shut for the occlusion. Final *n* is surd.

Fig. 28.—*jilu*, three. *J* is as in the last figure. The nose tracing for *l* is much higher than for the adjacent vowels, indicating that the naso-oral passage is more open for this sound, as probably for all consonants, than for vowels. The voicing of the vowels in this nasal tracing does not prove nasalization. Compare figures 15 and 16.

Fig. 29.—*emen*, four. There is a surd breath approach to the vowel, which also appears in most mouth tracings. Intervocalic *m* is sonant, final *n* surd except for light voicing in its first part.

Fig. 30.—*läñü*, mouth. The gradual transition from surdness to sonancy in the initial *l* is clear both in the upper (nose) line and the lower (mouth) line. As in figure 28, more breath escapes through the nose for *l* than for the following vowel. Medial *ñ* is short and well voiced; the passage of air through the nose increases while diminishing through the mouth without being entirely checked; even the voice vibrations are recorded from the mouth, indicating imperfect closure by the tongue.

Fig. 31.—*kenuam*, your neck. The typical tracing from the mouth for initial *k* is accompanied by a marked elevation in the nasal line, indicating that the air checked by the tongue finds its way out through the nose. Medial *n* has the same character as *ñ* in the last figure. Final surd *m* hardly shows even in the tracing from the nose. It is therefore very weak. Compare figure 11.

Fig. 32.—*rcn*, water. Initial *r* is much like *r* of figure 20, but with fewer tongue movements. It probably continues to the highest point of the mouth tracing, when the vowel commences. The greatest elevation in the mouth record corresponds to the greatest depression in the tracing from the nose, as in most instances. The flow of breath through nose and mouth therefore tends to be in inverse ratio. The former preponderates in consonants, the latter in vowels.

Fig. 33.—*ret*, sunshine. The occlusion of *r* is fairly definite, but the explosion is less clear, the succeeding continuant element being distinct, particularly as regards tongue movements. These appear even in the nasal tracing, numbering about four flaps during surdness and five or six during the voiced part of the sound. Final *t* shows a definite though weak explosion from the mouth. The duration of the occlusion is a quarter second, or typical of the occlusion of initial *t*. The voice momentarily strengthens before it suspends for the occlusion.

Fig. 34.—*ât*, gall. There is a slight mouth flow of surd breath before the vowel properly begins. The *t* occlusion is sudden and complete for the mouth, but gradually attained in the nose. The release is wanting in the mouth, but shows definitely, though weakly, through the nose.

MUSEUM OF ANTHROPOLOGY
OF THE UNIVERSITY OF CALIFORNIA.
AFFILIATED COLLEGES,
SAN FRANCISCO, CAL.

PROFESSOR BOAS' NEW THEORY OF THE FORM OF THE HEAD—A CRITICAL CONTRIBUTION TO SCHOOL ANTHROPOLOGY

BY PAUL R. RADOSAVLJEVICH

I. INTRODUCTORY

LAST year a government document was published by the Immigration Commission in which an attempt was made to show that New York environment is bringing about "fundamental" changes in the physical type of immigrants. The author of this document is Professor Franz Boas¹ (i) of Columbia University.

Under his direction the heads of a large number of New York immigrants have recently been measured. These measurements include a study of: (1) the stature; (2) weight; (3) general physiological development of the individual; (4) two head measurements (length and width) and the corresponding cephalic index, indicating "the form of head"; (5) width of face; (6) color of hair, eyes, and skin. A majority of the individuals measured were school children.

The results of this investigation aroused much popular interest and considerable discussion in the daily press, and many popular magazines and semi-scientific journals repeated uncritically the several "unexpected" conclusions. It was widely believed that the results had dealt a death blow to the old theories regarding the stability of the form of the head, because they seemed to show that the form of the head is not a permanent characteristic of race as anthropologists had assumed; that the American environment rapidly affects the form of the head; that Jews are growing long-headed, and Sicilians short-headed, *i. e.*, that the cephalic index of the Jews is decreasing and that of the Sicilians increasing.

More especially on page 39 Boas concluded that

"on the whole, there has been a decrease in length of head, width of head, and width of face since the middle of the past century. . . . A feature that is particu-

¹ Number: in parenthesis after authors' names or quotations refer to the numbers in the Bibliography at the end of this paper.

larly noticeable is the general drop of all the absolute measurements after the year 1894. An attempt to combine all the material, adult and children, for these years, brings out the sudden drop after 1893 even more clearly; and a similar phenomenon is repeated between the years 1907 and 1909. For this reason I am inclined to believe that the type of immigrants is directly affected by financial panics."

In another place (p. 28) Boas expresses the same conclusions in the following words:

"The type of immigrants changes from year to year, owing to a selection which is dependent upon the economic conditions of our country. This is shown by the fact that after the panic of 1893 a sudden decrease in the general development of immigrants may be observed, which persisted for several years. A similar change seems to have taken place after the panic of 1907."

How the "type" of immigrants was affected after the panic of 1893 is shown in Table III (p. 28) referring to the general deterioration in stature, length and width of head, width of face, and cephalic index (see Table VI of this study). According to these figures the panic of 1893 *decreased* stature, length and width of head, and width of face, but *increased* the cephalic index.

Does this increase and do these decreases affect the physical type of immigrants at all? Are the observed differences significant, and if so, are they due to the American environment and financial panics? Is there any scientific explanation of "far-reaching" changes in this new theory? Does it really mean a discovery in anthropological science that is of "fundamental" importance?

Before we enter into this large subject it is necessary to remind the reader of the older notions concerning the form of head, because it will help us in localizing various very important difficulties involved in the problem, and throw a new light on Boas' material and his explanation of it. Boas himself admits frankly that his "surprising and unexpected" results require "the most thorough-going criticism before being accepted as definitely established." We also believe that a healthy criticism will be beneficial.

II. HISTORICAL: ON THE FORM OF THE HEAD

Until the appearance of this new theory, the historical answers to the question, "Does the form of the head change?" may be summarized in the following theories:

1. *The Mechanical-functional Theory*

According to this theory the shape of the head may be caused by the mechanical influences during the postnatal life. Thus the head-form may be modified individually by the kind of cradle in which baby sleeps. In his *Descent of Man*, Darwin says that the

"habitual spasm of the muscles, and a cicatrix from a severe burn, have permanently modified the facial bones. In young persons whose heads have become fixed either sidewise or backward, owing to disease, one of two eyes has changed its position, and the shape of skull has been altered apparently by the pressure of the brain in a new direction." (2)

He quotes Jarrold's *Anthropologia* (1880, pp. 115-6) in which are given the cases of modification of the skulls from the head being fixed in an unnatural position. Darwin says that Jarrold believed "that in certain trades, such as that of a shoemaker, where the head is habitually held forward, the forehead becomes more rounded and prominent." (2)

In another place Darwin says that the skulls of many of our improved and domesticated species of animals have varied perceptibly; and he cites in addition pigs, diverse species of fowls, and rabbits. From his own observations on domestic rabbits he inferred that some kinds of skulls

"have become very much larger than in the wild animal, while others have retained nearly the same size, but in both cases the brain has been much reduced relatively to the size of the body. Now I was at first much surprised on finding that in all these rabbits the skull had become elongated or dolichocephalic; for instance, of two skulls of nearly equal breadth, the one from a large domestic kind, the former was 3.15 and the latter 4.3 inches in length." (3)

He also thinks that the tall men may be compared with the larger and longer-bodied rabbits, all of which have elongated skulls, or are dolichocephalic (2). And about fifty years ago, a German anthropologist, Welcker (4), found that short men more frequently have rounded heads and tall men elongated ones.

The mechanical-functional theory has been supported in quite recent times by a Stockholm anthropologist, Nyström (5), who believes that the form of head may change under the influence of diet. The osteologist Holden (6) claims that different habits develop different muscles, and that these muscles give rise to

modifications in the form of the bones as well as the bodily configuration. In short, function makes structure. He contrasts the skulls of the *Carnivora* with those of the *Ungulata* (or hoofed animals). His examples are the tiger and deer. He says:

"The skull of the tiger is in perfect adaptation to his enormous temporal muscle. It has a high median ridge, to which the muscles are attached, great arches of the zygoma, under which they pass, and broad and lofty coronoid processes, into which they are inserted. But his masseters are comparatively small, therefore the zygomata and the angles of the jaw are not specially strong. Now, the sole action of this temporal muscle is to clench the teeth together as on a hinge; so we find that his jaw articulation is hinge like, and allows no other motion. This mechanism is admirably fitted for cutting purposes, but is quite unfit for grinding; so his teeth are cutters. He has no grinders. Exactly the converse of all is true of the deer: his temporals are small; he has no median ridge, the passage under the zygoma is small, and his coronoid process is delicate and scarcely deserves notice. On the other hand, his masseters and pterygoid plates are greatly expanded, the angles of the jaw massive and extensive. The masseters acting with the internal pterygoids cause the grinding action; so here the articulation of the jaw is nearly flat, allowing of a free grinding movement; and in accordance with this, we find the teeth are flattened on the surface, and good grinders. It will be seen how clearly this conformation is in keeping with the habits and nature of each animal"(6).

And the slight differences between opposite sides of the same skull is explained by Holden on the basis of the law of Cuvier (7): "That an invariable co-relation exists not only between the different parts of an animal's body, but likewise between the parts of his body and his mode of life."

Holden says that

"the posterior condyloid foramen of one side may be wanting, the mastoid process of one side may be larger than that of the other, or the digastric fossae may be of unequal size; one nasal passage may be larger than the other; the lateral sinus may be much deeper on the one side than on the other, or there may be a middle clinoid process on one side only. Asymmetry may occur in men highly gifted as in the celebrated French anatomist Bichat. This is no more than one might expect, seeing the difference often existing between features of the two sides of the same face. Such want of symmetry is greatly exaggerated in many of the lower animals, as may be seen in the Cetacea, in the head of the great sperm-whale, or in that of the narwhal. . . . But the most striking example of asymmetry is seen in those of flat-fish which lie usually on their left sides, viz., soles and plaice. . . . For in them both eyes are on the right or upper side of the skull, and one orbit only is completed, the eyes being directed away from the ground on which they lie. The teeth are chiefly developed on the left side of their jaws—

away from the side on which their eyes are—that is, on the white side. It is interesting to note that in those fish, when very young, the skulls are symmetrical. When the turbot is just hatched, it has an eye on each side of the head, and it is only by subsequent development that the asymmetry occurs. The turbot, unlike the sole and plaice, lies on its right side" (6).

Holden says, further, that the

"great and heavy skull of the crocodile contains large nasal passages and air-cavities which float it, so that its body can lie under the water while its eyes and nostrils alone appear just above the surface" (6).

In regard to the fact that some human heads are long, some broad, and others round, Holden claims that it is due to "the varying extent of growth of bone either in the transverse or the longitudinal sutures," or to "the early union of one or other of them." So in the case where the parietal bones unite very early,

"the skull was unable to accommodate the growing by increasing in breadth, and therefore, could only increase in length by growing at the fronto-parietal and the occipito-parietal sutures, thus giving rise to these extraordinary long skulls" (6).

Holden goes so far as to claim that "the history of the animal is always written on its bones," and that "low degraded types have skeletons which can not be mistaken, while the healthy, intelligent, and upright carry their characters in their skeletons as much as they do in their faces."

Müller (8) claims that there is a close relation between the form of head and the mechanism of birth. He gives many illustrative examples from his own observations. Görke (9), Papillault (10), Haeckel (11), and others studied these mechanical influences in the light of functional shaping of skulls, based on the ontogeny and phylogeny of the human skull. In more recent times R. C. Osborn (12) studied the effects of the shape of skulls on the teeth of man. All these factors show the great complexity of the problem. (See especially Hrdlička, Eskimos, effects of temporal muscles on form of jaws and head.)

2. *The Hereditary Theory*

This theory is one of the oldest. But it has at least the following three forms:

a. The First Form of the Hereditary Theory.—According to this

theory *the shape of head is not changed*: it is one of the clearest of all permanent hereditary differences; it is relatively uninfluenced by climate, age, food, locality, and exercise. This theory is in one form or another advanced by Myers (13), Spitzka (14), Möbius (15), Rieger (16), G. Stanley Hall (17), Zupanchich (18), and other craniologists, archeologists, and so-called "anthropo-sociologists" (19).

So, for example, Myers found that the chief head measurements show approximately the same variability in the "prehistoric" people of Upper Egypt as in the modern population of the same region. A pupil of Prof. Martin (former director of the Anthropological Laboratory of the University of Zurich), Oetteking (20), came to the conclusion that the influence of Bushmen, Negroes, Libyans, and Hamito-Semites upon the Egyptian skulls can not yet be given exact craniometric expression. Keith (21), in his study of the remains of an ancient Briton, the Galley Hill man, was "struck" with the modernity of his form of skull, *i. e.*, the extreme length and extreme narrowness of his head, which is the "national" characteristic of modern Englishmen. Similar results are reached by a Croatian anthropologist, Gorjanovich (22). We might also mention the fact that the form of skull of a Scandinavian of the neolithic time is very similar to that of the modern Scandinavian. There are other cases of this kind.

From both Myers' and Keith's investigations one is led to conclude that age alone does not produce in a people increased heterogeneity. Keith says that the history of man in England does not begin some 5,000 years ago with an invasion of Celt or of Saxon, but at a period of which 5,000 years is but a small fraction. This theory has recently been advanced also by a Slovenian anthropologist, Zupanchich, in his lecture given last year at the University of Belgrade (Serbia) (23).

In short, the theory that the shape of the head is stable, hereditary and not fortuitous is the first form of the hereditary theory.

b. The Second Form of the Hereditary Theory.—This form of the hereditary theory holds that *the shape of the head is inherited, but that it does not assume its final shape until after birth*, and that it

does not depend on the mixed parental value of the cephalic index. O. Ranke (24), in his study of the form of the head of 4,607 German children (the age ranging from a new-born infant to a child of 15), concludes that the form of the head reaches its definite form relatively early, at seven, or even at six years of age. Sir W. Hamilton also says that in man the encephalos reaches its full size at about seven years of age (25). Vosilyev (26), who studied 936 boys and 264 girls between the ages of 7 and 16 years, belonging to the district of Szerpuchov, in the Government of Moscow, found that the form of head does not finally shape itself until after the sixteenth year. Pfitzner (27), who studied 3,660 cases in Elsass, also found that, apart from sex and age, the cephalic index seems to be the only absolutely fixed character for the determination and recognition of individuals.

Boas (28) in another study, in 48 families of eastern Jews, measured by Fishberg, states that one half of the children resembled the father in regard to the shape of head and the other half the mother. But the results of O. Ranke (29), based on head measurements of children of the same parents (51 families) do not substantiate Boas' conclusions. Ranke found a very striking resemblance in the form of head of all children of the same parents, regardless of the fact that the brothers and sisters were of different ages (ranging in age from 3 to 14 years), with two or three exceptions. Ranke's results agree with those of Thorndike (29*a*) who found that 35 pairs of twins of New York City showed a striking resemblance in cephalic index. Thorndike measured 50 pairs of twins from 9 to 15 years old; 58.5 per cent. of these school children showed brachycephaly, 37.1 per cent. mesocephaly, and 4.3 per cent. dolichocephaly.

Gray and Tocher (30) also found very little difference in the cephalic index of the racial elements of 14,561 pupils in east Aberdeenshire, England. Binet (31) in France, Tscherowskovsky (32) and Viasemsky (33) in Russia, and many others, came to almost the same conclusion (34). Matieška (35), studying some 7,000 boys in the public schools of Prague, from 5½ to 14 years of age, found throughout those ages the same national, brachycephalic

type of the head. The measurements by two pupils of professors Meumann and Martin, Engelsperger and Ziegler (36), of 238 boys and 238 girls of the entering classes (average ages 6 years and 4.5 months) in the schools of Munich, show that the bulk of these pupils had the national form of the head—93.5 per cent. being brachycephalic and only 6.5 per cent. mesocephalic (not a single case of dolichocephaly). Schliz (37), studying 962 school children (from 12 to 14 years of age) in Heilborn, also found that the large majority of these children represent the brachycephalic type of head-form. The same is found by a pupil of Professor Martin, Teumin (38), who measured 100 female university students (mostly of Jewish race) in the Anthropological Laboratory of Zurich University. The bulk of these students were brachycephalic—74 per cent.

Browne (39), who measured the students of Trinity College (from 1891 to 1898), found an average cephalic index of 72.5, which is the national type of the head of Englishmen. The same result was found by Venn (40), who measured 1000 students of Cambridge University (England). The majority of these students were mesocephalic—55.2 per cent.

In addition to these we may mention the study of a Polish author, Kraitschek (41), based on the measurements of 173 Jewish students of the State Gymnasium in Landskron (Galicia, Austria). He found not a single dolichocephalic student; only three were mesocephalic and the rest, 170 in number, were of a brachycephalic type (98 per cent.).

All these and many other studies show clearly that the youth represent the same type of head as the race to which they belong, with slight differences in degree, of course. This is the second form of the hereditary theory.

c. The Third Form of the Hereditary Theory.—This form of the hereditary theory claims that the *shape of head* (or rather skull) *is inherited*, but "heredity" means not absolute stability. Hrdlička (42), believes that heredity is subject to incidental irregularities as well as to gradual modifications. He thinks that the alterations in the skull

"need not be general or of prime importance, and may require for their d's-

coverly detailed study and extended comparisons; but in the case of an individual from the earlier stages of the geological period immediately preceding the recent one they should as a rule be pronounced enough to be easily apprehended."

Hrdlička is very careful in using generalizations. He says:

"In the case of single features or with scanty material, all far-reaching conclusions must be avoided, for in such cases we can not be certain that we are outside of the territory of semipathological occurrences, and features of reversion, degeneration, or purely accidental variation limited to individuals or small numbers of persons."

Hrdlička's scientific sanity and exactness in measuring crania might be compared with the craniological work of Klaatsch (43), Kollmann (44), Martin (45), and other European experts in experimental physical anthropology.

3. *The Geographical-local Theory*

This theory is not unlike the preceding. It claims that the shape of the head is distributed more according to geographical localities than to nationalities. So, for example, the people of the Alps, no matter what language they may speak, show considerable similarities in type. Deniker (46), who analyzed and utilized all that has been published in different languages on the cephalometry and craniometry of European peoples (the total number of indices examined represent about 380,000 measured individuals or skulls), concludes that the cephalic indices are distributed over four groups of well defined areas, *viz.*, a dolichocephalic area, with mesocephalic *enclaves*, in the north of Europe; another more pronounced dolichocephalic area in the south of Europe; an area of strongly brachycephalic heads in the center of western Europe, and, finally, a sub-brachycephalic area in eastern Europe. A similar cephalic "world map," constructed from data on living men, and "sufficient in amount to eliminate the effects of chance," is given by W. Z. Ripley (47).

Beddoe (48), in studying 200 boys (16 and 17 years old) found that those belonging to the navy have larger heads than those of the reformatory and industrial schools. If anything, he says, their heads are slightly broader, but within the limits of error. He concludes that the differences in the form of head are connected with

the locality rather than with any other condition or characteristic. But Gray and Tocher, who measured about 15,000 school children from 93 schools, covering 30 parishes, in England, could not draw such a conclusion; they found only a very little difference in the cephalic indices of the racial elements, *i. e.*, something racial to heredity.

According to Ammon's (49) investigation the longheaded individuals are concentrated more in the city than in the country. In studying the recruits of Baden and "Gymnasialschüler" from Karlsruhe and Mannheim he found that the *urban class* (those whose fathers were of city birth, as well as themselves), the *semi-urban class* (those born in cities, but whose fathers were immigrants from the country), and the *semi-rural class* (those born in the country who had migrated to the city), as compared with those who remained in the country, show a regularly increasing dolichocephaly in each generation. He believes that the longheaded individuals are intelligent, or, as he calls them, "die Auserlesenen," the selected, because they have either the energy or the physical ability to seek their fortunes at a distance from their rural place of birth. This theory of cephalic superiority was accepted by many anthroposociologists (50). But others say that the percentage of dolichocephaly decreases with the progress of civilization. J. Ranke (51), who studied the "Reihengräber" of Bavaria, the skulls of Lindau, and the skulls of modern Bavaria, found a very regular decrease of dolichocephaly and an enormous increase of brachycephaly:

	Reihengräber of Bavaria	Lindau	Modern Bavaria
1. Dolichocephaly:	42	32	1
2. Mesocephaly:	44	36	16
3. Brachycephaly:	14	32	83

Weisbach (52) also found a brachycephalic index for the contemporary Austrian Germans. According to Livi (53) in northern Italy the professional classes are more dolichocephalic than the peasants, but in the south the reverse is the case. Topinard (54) says that the cephalic index

"varies in the human races from 71.40 in Greenlanders to 85.63 in Lapps, in the averages of the series; and from 62.62 in a New Caledonian to 92.77 in Slav

(Wend) in particular instances. The difference is greater if we include the distorted skulls. A scaphocephalus in the Laboratory of Anthropology has an index of 56.33, and a Peruvian skull of an Inca, one of 103."

Our intention is not to criticize here all these more or less different theories. All who are familiar with the sources of these investigations will agree that in many cases it is very hard to decide what are the reasons of very great differences in the form of the head. These differences appear to be due partly to the differences of race, but also, unfortunately, partly to the differences in the methods, and precision of measurements, and in the mathematical calculation. It is, therefore, almost impossible to tell in many cases whether a difference is due to inaccuracy or to variation of individuals. The past of craniological and cephalometrical studies moved along the horizontal rather than along the vertical line, a big collection of anthropological data being made without deeper explanation of it. President G. Stanley Hall is right in saying that there are so few problems in this field yet solved that the great number of cephalometric and craniometric measurements sometimes insisted on seem at present little more than affectation (*Adolescence*, vol. I, p. 72).

Evidently further careful studies and investigations are necessary before any dogmatic statement can be made. Does Boas' new theory present a hope of reaching such a goal? Did he utilize elementary errors of previous investigators? Did he grasp the difficulties of their theories in shaping his own theory? Is his investigation a progress or regress in experimental physical anthropology in general and in school anthropometry in particular?

III. THE NEW THEORY IN RELATION TO RESULTS

We thought it would be in place to point out the main theories of the origin of the form of the head before we take up the theories of Boas, based on his study of immigrants and their descendants. His new views do not agree with any previous. He himself is opposed to the first, the mechanical theory. On page 51 of his report he says:

"It seems conceivable that the change in the length of the head might be due to the treatment of the infant. While the children born abroad are swathed, the

method of treatment in families living in America is entirely different. The swathed child lies on its back, and the continued pressure upon the occiput might bring about a slight shortening of the skull. All the data relating to correlation between width of head and length of head are opposed to this assumption."

He is not an enthusiast for the hereditary theory either, because, he says, the head changes may be inherited, and yet not necessarily reproduce the characters of the parents. He believes that it is quite possible that we can leave the problem of the head entirely out of consideration.

He also does not agree fully with the third main theory, the geographical-local theory. On page 32 of his report he says that no evidence has been collected which would show an actual change in type due to the direct influence of environment, because the type of immigrants changes from year to year, owing to a selection which is dependent upon the economic conditions of our country, "far-reaching" changes in "type" which "can not be ascribed to selection or mixture." According to Boas the racial characteristics do not survive under the new social and climatic environment of America. We may, therefore, call Boas' theory the *environmental-economic theory*, the first theory of its kind; *environmental*, because it claims that the descendants of the European immigrants change their type "*even in the first generation almost entirely.*"

"Children born not more than a few years after the arrival of the immigrant parents in America develop in such a way that they differ *in type (!) essentially* from their foreign-born parents. These differences seem to develop during the earliest childhood and persist throughout life. It seems that every part of the body is influenced in this way, *and even the form of the head, which has always been considered as one of the most permanent hereditary features, undergoes considerable change.*"¹

The theory may be called *economic*, because it claims that the panics of 1893 and 1907 caused a "sudden decrease in the *general* physical development of immigrants" and a "sudden" increase in the cephalic index.

But before accepting these unexpected scientific results unqualifiedly they should first be sifted by those who at least know the immense difficulties in attacking such complicated problems.

¹ Here, as throughout this study, the Italics are mine.

Therefore, this critical study. Our purpose is to follow step by step the scientific validity of Boas' results on the shape of the head and his interpretations of them. We will follow the order of his summary:

a. Boas' First Conclusion

"The head form which has always been considered as one of the most stable and permanent characteristics of human races, undergoes *far-reaching changes* due to the transfer of the races of Europe to American soil. *The East European Hebrew, who has a very round head, becomes more long-headed; the south Italian who in Italy has an exceedingly long head, becomes more short-headed; so that both approach a uniform type in this country.*"

But what is the nature of these "far-reaching changes," and do they really affect "the type" of the form of the head? For the sake of concrete illustration let us compare Boas' results with those of Hoesch-Ernst (56), Hrdlička (55), Landsberger (57), Muffang (62), O. Ranke (58), Reuter (59), West (60), Windle (61), and the results of the study of the Edinburgh and Aberdeen school children (63). Table I gives this comparison.

Before attempting to make any comparison and draw any conclusion, let us clearly state that anthropological science discriminates few types of the head as indicated by the *cephalic index* (generally called the "cranial index," or "latitudinal index" or "index of breadth," *in contrast* to two other altitudinal cephalic indices, *viz.*, the "vertical index" or "index of height" or the length-height cephalic index, and the breadth-height cephalic index). It is a ratio between the width (or breadth) of head and the length of the head. Say the width (W) is 142 mm. and the length (L) 180 mm. Then the cephalic index (x) is found as follows:

$$180 : 100 = 142 : x \quad \text{or} \quad x = \frac{142 \times 100}{180} = 78.$$

In short the formula of this index is: $x = \frac{W \times 100}{L}$.

This method of determination of cephalic (or cranial) index was introduced by a Swedish anthropologist, Andreas Retzius (1742-1821) (64). By measuring the skulls he found two extreme indices: the *long* or dolichocephalic and the *round*, *broad*, or brachycephalic.

TABLE I

[illegible]

Later this number of types was increased to five. Today anthropological science discriminates three main types of the form of head as indicated by their indices:

- (1) Long-headedness (or dolichocephaly) $x - 74.99$.
- (2) Medium-headedness (or mesocephaly) $75 - 79.9$.
- (3) Broad-headedness (or brachycephaly) $80 - x$.

This is the classification of Török (65), Reuter, Fishberg (66), and others. Let us now see what the above mentioned "far-reaching changes" mean.

If we compare Boas' average figures for American-born and foreign-born Hebrew boys and girls we see that at all ages both are of the *same type*—they all are broad-headed. And if we agree with those authors (Martin (67), Engelsperger and Ziegler, etc.), who classify broad-headedness into sub-brachycephaly (80–86.9) and hyper-brachycephaly (87– x) we shall find that both belong to the same division, sub-brachycephaly. Not one single year is represented by hyper-brachycephaly (except the Hebrew foreign-born girls whose average index is just 87, which is, according to O. Ranke's classification, also under sub-brachycephaly).

Or let us take the Sicilian boys. Boas concludes that the south Italian, who in Italy has an "*exceedingly long head*," becomes more "*short-headed*." But his average values show that not *one single* year measured is represented by exceeding long-headedness. The index of such long-headedness (technically called "hyper-dolichocephaly") is below 70 (according to Hoesch-Ernst's classification), and the figures for Sicilians show a minimum of 76, which represents a mesocephalic type of the form of head.

In short: *It appears that Prof. Boas' own figures or results do not prove his conclusions.* It may perhaps be contended that these figures are only averages. To this we may reply: *first*, that it is not customary to draw "entirely unexpected" conclusions from mere averages,—a method which has been condemned both in America and in Europe; *second*, if we take into account all individual subjects measured, we find that the number of medium-

headed is very small. Out of 3,090 American-born Hebrew boys and girls there are only 13 long-headed individuals (10 boys and 3 girls); out of 2,942 foreign-born Hebrew boys and girls there are 4 long-headed individuals (boys only). On the basis of Boas' tables presented in his appendix (Tables III, 5, *a*, *b*; Table IV, 4, *a*, *b*) we find that the bulk of both American-born and foreign-born Hebrew boys and girls belong to the same brachycephalic (or rather to the sub-brachycephalic) type at all ages represented. The only exception is the age of 17 in the case of American-born Hebrew girls, whose largest percentage belongs to mesocephaly (50 per cent.). The rest are distributed as follows: 36.4 per cent. brachycephaly, and 13.6 per cent. dolichocephaly.

If we compare the percentages of the whole, regardless of age, we have the following table:

TABLE II

	Dolichocephaly	Mesocephaly	Brachycephaly
I. Foreign-born Hebrew boys	4	12	84
II. Foreign-born Hebrew girls	2	12	86
III. American-born Hebrew boys	3	27	70
IV. American-born Hebrew girls	5	26	69

So far as these results go it can not be said that there is a real sex difference (a fact found also by Wissler (68) in his measurements of college students, Columbia University), and, therefore, we may combine these percentages under the two headings thus:

	FOREIGN-BORN HEBREWS	AMERICAN-BORN HEBREWS
Dolichocephaly:	3	4
Mesocephaly:	12	26
Brachycephaly:	85	70

The ratio of these types does not show any "far-reaching change," because it deals *with two distinct groups*, and does not affect the type—the bulk in both belonging to brachycephaly. The tables show that there is a difference of 1 per cent. in dolichocephaly, 14 per cent. in mesocephaly, and 15 per cent. in brachycephaly, but *it is not known what the differences were in the parents of these two groups.*

Again, Boas' theory is based not on percentile values but on averages, showing that there is not one single age represented either by long-headedness or medium-headedness. Boas' figure 1, representing the comparison of head forms of American-born and foreign-born Hebrews, has no bearing on his conclusion, that "the east European Hebrew, who has a very round head, becomes more long-headed" on American soil. The differences found by Boas, if they have any real meaning, may be regarded as the normal differences of separate groups, such as are frequently noticed in separate parts of the same people.

What is true of American-born and foreign-born Hebrew males and females is also true of the Sicilians born here and abroad. Table I does not prove Boas' conclusion that the south Italian, who in Italy has an "exceedingly long head," becomes more short-headed, because at all ages represented in this table there is not a single year represented either by "exceedingly" long-headed or by the lowest degree of dolichocephaly. The only conclusion we can draw from Boas' results of the cephalic indices of the American Sicilians is that the foreign-born American Sicilians, males and females, from 5 to 18 and over, are highly mesocephalic (cephalic index, 78-79), with the exception of the ages 5 (males, 80.8), 6 and 7 (females, 80.2; 80), the cephalic indices of which are very slightly broad-headed.

In regard to the American-born Sicilians, both males and females, we might conclude that the cephalic index is slightly above 82 only at the age of 12 (ceph. index, 82.1), in males, and at 6 and 16 years of age in females, whose cephalic indices are 81.2 and 85.0 respectively. The only striking difference affecting the type is shown at the age of 16 where the foreign-born Sicilian females are highly mesocephalic (78.4) and their American sisters of the same age are brachycephalic (85.0). This difference may, however, in the small number of cases, be entirely incidental. Boas also says that the adult American-born Italians are "few in numbers," but he does not state the exact number. Even in his appendix there is not a single table referring to Sicilians; and it is, therefore, impossi-

ble to see what the number of cases involved in every year tested, and what the individual distribution of cephalic indices is.

If we take Boas' results as they are, and compare them with those of other school anthropologists we shall see that both American-born and foreign-born Hebrews, males and females, are more or less sub-brachycephalic throughout the ages measured. These individuals agree with the subjects measured by Hoesch-Ernst, Hrdlička, Landsberger, O. Ranke, Reuter, and Teumin. In addition to that we may mention that the average figures of Matiegka Vosilyev, Schliz, Kraitschek, Engelsperger and Ziegler, and many others, agree with Boas' results in regard to the cephalic type of his Hebrew individuals. Schwerz (68*a*) measured recently 1,788 individuals in Kanton Schaffhausen, Switzerland, and found that all of them were more or less brachycephalic: 83.1 (at the age 6-7 years), 83.5 (7-8), 83.7 (8-9), 82.4 (9-10), 83.9 (10-11), 83.1 (11-12), 83.2 (12-13), 82.9 (13-14), 83.4 (14-16), 82.8 (16-17), 82.5 (17-18), 82.8 (18-19), 82.9 (19-20), 82.5 (over 20 years).

In regard to the American-born and foreign-born Sicilians Boas' average figures show that they are of mesocephalic type. Compared with the results of other authors mentioned in Table I we see that Boas' Sicilians agree with the type of the head form of West's subjects in America, and with that of pupils in Aberdeen, Edinburgh, Liverpool, and Birmingham (England). In addition we may mention that the high mesocephalic type was also found by Browne, Beddoe, Gray and Tocher (in England), and by Wissler and MacDonald (69) (in America).

Referring to his first conclusion Boas says:

"This fact is one of the most suggestive ones discovered in our investigation, because it shows that not even those characteristics of a race which have proved to be most permanent in their old home remain the same under our new surroundings; and we are *compelled* to conclude that when these features of the body change, the whole bodily and mental make-up of the immigrants may change" (p. 8).

A short time ago a well-known New York magazine made a sarcastic reference to the old statement "You can not change human nature," based on Boas' conclusions.

b. Boas' Second Conclusion

"The influence of American environment upon the descendants of immigrants increases with the time that the immigrants have lived in this country before the birth of their children."

But this conclusion does not affect the type of the head form, at least. Here is Boas' table (p. 10):

TABLE III

	Cases	Cephalic Index	Average Age
<i>Sicilian:</i>			
Foreign-born boys 5 to 12 years old	241	79.5	9.6
American-born boys 5 to 19 years old:			
Born less than 10 years after arrival of mother	375	80.9	10.0
Born 10 years and more after arrival of mother	127	81.8	9.5
<i>Hebrew:</i>			
American-born boys 7 to 10 years old:			
Born 10 years and more after arrival of mother	290	82.3	9.2
Born less than 10 years after arrival of mother	257	82.4	9.2
Foreign-born boys 7 to 10 years old	179	84.6	9.1

This table shows clearly: (1) that all Hebrew boys (both those born less than 10 or those born more than 10 years after arrival of mother in America and those born in Europe) are of the same sub-brachycephalic type (not one of them is represented by the average hyper-brachycephaly!); (2) that all Sicilian boys are of the mesocephalic type of rather high degree. The American-born and foreign-born Hebrew and Sicilian boys differ only in degree, which may be considered as something normal on account of the possible errors in measuring and calculations, and to the comparatively small number of cases, or, especially, as due to corresponding differences in the parents.

In this table Boas compares 5-12 years old foreign-born and 5-19 years old American-born Sicilian boys with the 7-10 years old Hebrew boys born in America and Europe. The range of age (and, of course, greater individual variation) in Sicilian boys is 14 years and in Hebrew boys—only 3 years. Again the average values for these American-born Sicilian and Hebrew boys does not correspond with Table III (p. 12). According to this table the average value for the American-born Sicilian boys 5-19 years old is 80.5, not 81.3 as is suggested by Boas' Table II (the average of 80.9 and 81.8). According to our calculation from Table III the average value for the American Hebrew boys 7-10 years old

is 82.7, not 82.3 as suggested by Boas' Table IV (the average of 82.3 and 82.4). According to our calculation from Table III the average value for the American-born Hebrew boys 7-10 years old is not 84.6 but 84.4. It is very interesting to note that Boas gives no tables presenting the individual distribution of cephalic indices of Sicilian and Hebrew boys born less than ten years, or ten years and more, after arrival of mother. All that he gives is the year of arrival of foreign-born Hebrew boys and girls, and the year of arrival of mothers of American-born Hebrew boys and girls (pp. 40-42) without any data in regard to their cephalic indices.

c. Boas' Third Conclusion

"The changes in head form which the European races undergo here consist in the increase of some measurements, in the decrease of others."

So, for example, Boas found that the length of the head is increased in American-born Hebrews and decreased in American-born Sicilians; the breadth of head is decreased in American-born Hebrews, but increased in American-born Sicilians.

But what is the nature of this decrease or increase? Table IV (see next page) will tell the whole story.

From this table we may figure out the increases and decreases, if foreign-born subjects are compared with those born in America. The average of maximum increase of the length in the Hebrews is 3.8 mm. at the age of 19 years; the average minimum increase for the same race is 0.8 mm. And here is an exception. At the age of 6 the foreign-born Hebrew boys excel their American-born brothers in the length of head by 0.6 mm. In regard to the Sicilian boys we see that the average maximum decrease of length of head is 7.6 mm. at the age of 18 years; the average minimum decrease is 2.1 mm. at the age of 5 years. At the age of 10 years both are on the same average level, and at the ages of 14 and 17 years the American-born Sicilian boys excel their foreign-born brothers by 0.5 mm. and 7.0 mm. respectively. And there are other irregularities:

The average maximum decrease in the breadth of head of the American-born Hebrew boys is 5.7 mm. (at the age of 18 years) and their average minimum decrease is 1.0 mm. (at the age of 13 years), with one exception at the age of 19 where there is an increase

of 1.2 mm. The average maximum increase of the width of head of American-born Sicilian boys is 7.4 mm. at the age of 18; the average minimum increase is 0.5 mm. (at the ages of 7 and 13); the exception to this rule is the age of 5 showing a decrease of 2.8 mm.

The fact is that there are exceptions in Boas' "fundamental" and "far-reaching" discovery. And we may ask, are these increases and decreases of two or three millimeters on the average due to "the American soil" and "financial panics" rather than to errors in measuring, calculating, and comparing results and differences in the parental stock?

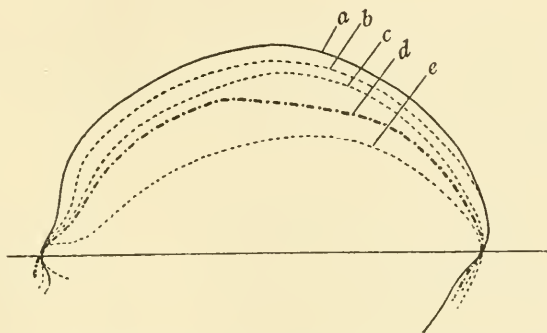


FIG. 55.—a, average European skull; b, Spy skull; c, Neanderthal skull; d, skull of *pithecanthropus*; e, skull of gorilla.

It is interesting to note here that all previous anthropologists found almost the same length of skull in the Europeans, Spy man, Neanderthal man, *pithecanthropus*, and gorilla. The difference of their skulls is shown in the height of the crania, as it is indicated in the accompanying figure (fig. 55) (after Wheeler: *Anthropology*, New York, 1909, p. 36; or Keane: *Ethnology*, Cambridge, University Press, 1901, p. 145).

There is no difference in the length and breadth of the head, but only in the height. Boas did not measure the height of the head. This third head dimension is of about the same difficulty in measuring as the other two head dimensions, the only difference being, perhaps, that the measurement of the height of the head

needs more time and trials until the required safety is reached. All modern anthropometricians measure the height of the head (Hoesch-Ernst, Engelsperger and Ziegler, Browne, Teumin, Reuter, Hrdlička, Martin, etc.). By means of this third head dimension could be figured out other, perhaps more important, cephalic indices and formulæ (*i. e.*, length-height cephalic index, breadth-height cephalic index, cephalic module, and cephalic capacity according to the formulæ of Venn-Galton, Schmidt, Pearson and Lee, or Hoesch-Ernst).

d. Boas' Fourth Conclusion

"The differences in type between the American-born descendants of the immigrant and the European-born immigrant develop in early childhood and persist throughout life. . . . The influence of American environment makes itself felt with increasing intensity, according to the time elapsed between the arrival of the mother and the birth of the child."

But a careful study of Boas' Table IV compels us to disagree with his conclusion that it "clearly shows the *strong* and *increasing* effect." This conclusion is of still less value if we apply it to the cephalic index. Let us study carefully his corresponding table giving the cephalic index of Hebrew males (p. 19) (see Table V opposite).

Are these differences in cephalic index of the total series and of foreign-born and American-born Hebrew males "the difference in type," and due to the "influence of American environment?" In other words is a *plus* or *minus* of 0.1 mm. and a *difference in type* due to the *American* soil? Besides this deviation from the average does not affect the type of the head form. Both foreign-born and American-born Hebrew males (regardless of the time of arrival of their mothers) fall within the brachycephalic type. In this connection I desire to call attention to what appears to me too great discrepancies in the numbers of cases recorded under different heads.

We find in the figures of the above table that one age is represented by 2 and the other by 223 cases (ages of 19 and 14 respectively). In the column three we see that the age of 6 is represented by 28 cases, but the corresponding tables of the length and breadth of head (pp. 17 and 18) have only 25 cases. The age

TABLE V

Age	Total Cephalic Index		Differences in Cephalic Index of Total Series and —					
			Foreign-born		American-born			
					Born less than 10 Years after Arrival of Mother		Born 10 Years after Arrival of Mother	
	mm.	cases	mm.	cases	mm.	cases	mm.	cases
5 years	83.5	71	+15	18	±0.0	29	—101	24
6 "	84.1	57	± 0.0	16	+0.4	28	—0.8	15
7 "	83.3	75	+ 0.7	18	+0.2	32	—0.7	25
8 "	83.3	98	+ 1.0	27	+0.2	45	—1.6	26
9 "	83.0	185	+ 1.7	51	—0.5	34	—1.0	100
10 "	83.0	359	+ 1.6	83	—0.4	137	—0.6	139
11 "	82.9	442	+ 1.6	114	—0.2	189	—1.1	139
12 "	82.9	521	+ 1.7	133	—0.2	225	—1.2	163
13 "	82.8	498	+ 1.2	137	—0.2	208	—0.9	153
14 "	82.5	477	+ 1.6	120	—0.2	223	—1.0	134
15 "	82.4	331	+ 1.7	94	—0.4	174	—1.6	63
16 "	82.6	73	+ 1.1	36	—0.8	23	—1.6	14
17 "	82.2	40	+ 0.8	24	—1.4	10	—1.2	6
18 "	82.4	27	+ 0.6	22	—0.7	3	—5.4	2
19 "	82.8	37	+ 0.1	31	+1.0	4	—4.3	2
20 and over...	82.9	803	+ 0.1	764	—	—	—	—

of 9 in the same column has 34 cases, but the corresponding tables show 61 cases each. The age of 10 in the same column has 137 cases, but the corresponding tables show 140 and 141 cases respectively. The age of 11 in the same column shows 189 cases but the corresponding tables show only 184 cases each. The age of 14 in the same column shows 223 cases but in the corresponding tables there are only 215 and 184 cases respectively. The age of 15 in the same column has 174 cases, and the corresponding tables only 154 and 126 respectively.

Again the age of 6 in the fourth column shows 15 cases and the corresponding tables 16 each; the age of 9 shows 100 cases, but the corresponding tables only 82; the age of 10 has 139 cases and the corresponding tables have 136 and 137 respectively; the age of 11 shows 139 cases, and the corresponding tables 144 each; the age of 14 has 134 cases and the corresponding tables 142 each; finally the age of 15 in the same column shows 63 cases and the corresponding tables 83 cases each.

The same table shows 803 cases at the age of "20 years and over" (first column), but the corresponding tables show 802 cases each; the second column of the same table shows 764 cases for the age of "20 and over," and the corresponding tables have 736 cases each.

It may be contended that all these errors do not materially affect the conclusions. We do not know. But we believe that these

and other methodological errors may be just the cause of the differences, and not the American soil and financial panics. Even by those minute deviations from the average it can not be certainly inferred that the greater variation of the figures means that the Hebrew or Sicilian is undergoing a modification of the shape of the head on American soil.

e. Boas' Fifth Conclusion

"The type of the immigrant changes from year to year, owing to a selection which is dependent upon the economic conditions of our country. This is shown by the fact that after the panic of 1893 a SUDDEN decrease in the general development of immigrants may be observed, which persisted for several years. A similar change seems to have taken place after the panic of 1907."

Here is Boas' table, referring to foreign-born Hebrews, men and women (p. 28):

TABLE VI

Period of Arrival	Stature	Length of Head	Width of Head	Cephalic Index	Width of Face
	cm.	mm.	mm.		mm.
1880	-0.5	+1.7	+1.5	+0.1	+3.5
1880-1884	-0.8	+0.2	+0.7	+0.0	+1.6
1885-1889	+0.5	+1.2	+0.3	-0.4	+0.4
1890-1894	+0.1	+1.6	+0.4	-0.5	+0.2
1895-1899	-0.9	-1.2	-0.3	+0.3	-0.4
1900-1904	+0.7	-0.9	-0.4	+0.2	-0.7
1905-1909	+0.0	-0.3	+0.1	+0.1	-1.2

This table does not warrant such a broad conclusion it seems to me, and especially in regard to the head form as indicated by the cephalic index, because it is of the same sub-brachycephalic type, before and after the panic of 1893. The slight increase (0.3) of the cephalic index after 1893 is so small that we may with confidence say that it is due to something else than the financial panic. Even the absolute measurements of the length and breadth of head show such small differences that they can hardly be ascribed to it.

These differences are of no typical character or fundamental significance. The same may be said of Boas' differences in cephalic index between American-born and foreign-born Hebrew children and their own parents (see his Tables XVI and XVII). It is a fact

that all Jews, from Roumania, Galicia, Little and White Russia, Poland, Lithuania (according to Boas' Table XII), including the foreign-born and American-born Hebrew boys and girls, and their parents, are more or less sub-brachycephalic. Even the differences which Boas found between parents and their children are normal differences in degree, which may be the result of the countless errors in such delicate measurements, and other causes.

IV. CRITICAL REMARKS ON DR BOAS' METHODOLOGY.

Regarding the methodology the following criticisms are to be made:

1. The prime condition in reporting cephalometric results is to give the *modus operandi*, to state exactly what is meant by antero-posterior and transversal head diameter. All that the author says about those two diameters is that the transversal diameter is the "width of the head," and that the second diameter ("or the length of the head") is measured from the forehead to the back of the head. But the "forehead" has at least three anthropometrical points—glabella, ophryon, and metopion. Perhaps the point most generally adopted was used, namely the point on the glabella, the space between the eye-brows, but it is not stated. Many anthropometrists (for example, Bertillon (70)) use the point situated on the root of the nose. And then, is "the back of the head" the inion, or the highest point on the occiput? Boas fails to state. Is the width of the head the maximum width of head taken above the ears wherever found? He also fails to inform us whether he followed the *Frankfurter Verständigung* (71), or the *International Commission Anthropométrique* (72) or some of the English systems (Cambridge or Dublin Anthropometrical Systems), for example the method given in the "Report of the Anthropometric Committee of the British Association" (London, 1910).

2. *Boas did not make all these measurements himself.* What assurance have we that his staff of thirteen anthropometrical amateurs exactly understood and applied with uniformity what was meant by the length and width of head? On page 36 of his report Boas gives a table of the measurements of his observers, and concludes

that the measurements are "quite comparable." We should like to enquire, however, whether those figures are averages of their "training" taken on the first and fourth Saturdays in May, 1909, the averages of the second Saturday of their practice, or the values of the first or last of their trials. This very important feature is not explained, and it is difficult to understand what the purpose was in giving the table. But, suppose these figures are the values of the final trial; then it is difficult to imagine what the rule is in such delicate practice for original research work. Bertillon, Martin, and other anthropometricians require from their students an exactness for the length and breadth of the head within the limit of about 1 mm. If the difference is as much as 2 it is regarded as a discrepancy beyond which measurements cease to make identification of the subject measured possible; and, if it is over 2, mistakes of a serious character are made beyond which non-identity can be made. The personal equation of Boas' thirteen observers who made successive measurements by way of preliminary practice on each other is in every observer above 0.5 mm. Now, if these figures represent the final test trial of those observers, then we can not understand how they can be qualified to take up such a delicate piece of research work. It is not stated how many times a subject was measured. Perhaps each subject was measured ten times. There would be probably ten signalments, differing by very small quantities. These differences can be, of course, ignored until they reach a certain point after which they destroy the value of the measurements. Have Boas' observers reached this point? Again, if this point is reached during the practice when each observer's measurements are controlled by their master, what personal equation can we expect from their main measurements of school children and adults! Boas, indeed, says that in the case of school children a "considerable number of control measurements were made," but he gives no details.

We have to keep in mind the fact that the method in the collecting of his data is not *individualistic* but *collective* ("generalized," *en masse*) in nature. This means Boas did not study the effect of "American soil" and "financial panics" on the *same* individuals during a period

of time representing the age of his subjects (4-20 years "and over") but he collected this data in a very short period, measuring a large number of immigrants. Why is it not possible that all the supposed "facts" thus brought to light may be quite spurious, owing to the great individual differences which may and do exist in the subject? Just on account of these individual differences it may be that the variations within a group of a given age are such as to completely obliterate all the actual peculiarities of the curve of growth. This difficulty is not touched upon in his theory.

4. Another difficulty with this theory is that *big conclusions are drawn from comparatively few measurements*. We are told that the measurements include about 30,000 individuals, but in the report are given only the results of measurements on (1) 6,032 foreign-born and American-born Hebrew boys and girls (Tables III and IV, in Appendix of Boas' report), 730 foreign-born adult Hebrew males, according to place of birth (Table I, Appendix), together 6,752 Hebrews; (2) 743 Sicilian boys (both born in Italy and America) but the number of American-born and foreign-born girls is not given. In regard to the adult American-born Italians, Boas says that they are "few in numbers." We are surprised indeed that he has not a single table in his appendix referring to Sicilians, yet throughout his report he comes again and again to his discovery that very short-headed Jews are becoming "long-headed" and very "long-headed" Sicilians "short-headed." Instead of these tables, he gives tables occupying 11 full pages, relating to his old study of the stature of Toronto children, and having no connection at all with his study of the descendants of immigrants. Again, from those tables given in the Appendix it is very hard to fix the exact number of Hebrews. According to Table I, Appendix, giving the types of foreign-born adult Hebrew males in regard to the place of birth, Table III, giving the cephalic indices of foreign-born boys, and Table IV, showing the cephalic index of foreign-born girls, the whole number of Hebrew immigrants is 3,672. But from Table II (also in Appendix, pp. 60, 64) we see that there are 1,527 "types of foreign-born Hebrews immigrating at different periods." Where are the rest of the 2,145 foreign-born Hebrews?

The distribution of individuals according to place of birth, different periods of immigration, and ages does not seem to be an ideal one.

As, for example, Hebrews from Lithuania represented by 82 cases and those from White Russia by 163. Or, the Hebrews immigrating during the period between 1900 and 1904 are represented by 214, and before 1880 by only 22 cases. Or, the cephalic index for foreign-born at the age of "20 and over" is based on 764 cases, and at the age of 6 there are only 6 cases. The American-born Hebrew boys at the age of 12 are represented by 388 cases, at the age of 18 by 5, and at the ages of 4 and 19 by 6 cases only.

In regard to the cephalic index of the foreign-born Hebrew girls the age of "18 and over" is represented by 895 cases, and the age of 4 by one single girl only. Of American-born girls, the age of "18 and over" is represented by 65 and the age of 4 by 6 cases.

Now, with such a very uneven distribution of cases it is impossible to accept the given explanation of his results. The even distribution of pupils is not an unimportant scientific requirement. The modern anthropological investigations of the pupils of Meumann and Martin (Engelsperger and Ziegler, Hoesch-Ernst), Reuter, Edinburgh and Aberdeen school anthropometric investigations, etc., had the same number of each year and sex. Even Quetelet (73) used this principle in his measurements in his day.

In looking over the tables dealing with the Hebrew subjects we have found a few more errors, which ought not to be found in the work of an expert biometrician of high rank, whose investigations are carried out by a "small army of serious, scholarly-looking young men" and generously supported by the Immigration Commission.

So, for example, the first table on page 60 of Boas' report shows that there are 214 cases of cephalic indices at the period of 1900-1904 and the two corresponding tables of the length and breadth of head show only 213 cases each. The first table on page 64 shows 162 cases of cephalic index in the period of 1890-1894, but corresponding tables show 161 and 163 cases respectively. On page 68 the average of the length of head of 18 foreign-born Hebrew boys is given as 169.9 instead of 169.4.

The first table on page 72 shows 764 cases of cephalic index at the age of "20 and over," but the corresponding tables show only 763 cases. On page 82 there are 24 cases of cephalic index at the age of 14, but the corresponding tables show 24 and 23 cases respectively. On the same page (second table) there are 65 cases at the age of "18 and over," and the corresponding tables show 66 and 67

cases respectively. On page 90 there are 100 cases at the age of 9, but the corresponding tables show only 82 cases. On the same page there are 139 cases at the age of 10, but the corresponding tables show 137 and 136 cases respectively. The age of 11 is represented by 139 cases, but the corresponding tables show 144 cases each. The age of 14 is represented by 134 cases, and the corresponding tables show 142 cases each. The age of 15 years shows 63 cases, but the corresponding tables show 20 cases more. The ages of 18 and 19 are represented by 2 cases each, but the corresponding tables of the length and width of head show not one single case.

5. Another difficulty in the way of accepting Boas' theory is the fact that *his statements in regard to the methods of his other records and measurements are not as complete as they should be*. So, for example, he does not say what he means by the figures representing the age of his subjects. Do they represent the "last birthday" or the "nearest birthday" or, perhaps, something else? The same ambiguity we find when we want to know what is meant, by the "general physiological development of the individual," "stature," "weight," "width of face." All that he says about "general physical development" is that observations were made on pubescence as a means of determining the approximate physiological development." However, he mentions that the "method of these observations has been developed by Dr C. Ward Crampton, but it is available only for the short period of adolescence." The question is now, was the same, or similar, or a different method used from that of Crampton and what is this method? Again, he says that in "those New York schools in which bathrooms are established it was possible to obtain the weight of children without clothing." But how about other schools and individuals investigated? We also fail to see the precise method in measuring the stature of body. Did the subjects stand in the upright position *with* or *without* shoes?

Again, what is meant by the distance "between the zygomatic arches"? This measurement is subject to great errors if the method of taking is not exactly stated, especially in measuring the living. Is it not possible that the "surprising and unexpected changes" in width of the face and other measurements are due to inexact statements and consequent inaccurate measurements?

A similar difficulty confronts us in regard to the instruments used.

On page 33 of his report we are told that the "color of hair, eyes and skin" was studied. On page 37 we are told that "a standard of hair-colors made by Messrs. B. Dickson & Co., of New York" used. But this "standard" is not described. Is this standard something new in principle and structure, or is it superior for example to the "Haarfarbentafel" of Fischer? Is there any scientific reason for preferring to use "no samples of eye-colors" instead of Martin's eye-colors (which, according to Boas, were "not as successful as might have been desired"), or Bertillon's chart of the colors of the human iris? Preference seems to have been given to guess-measurements of the eyes by young men of little experience over the best scientific means in that matter, "on account of the great expense involved in the purchase of a sufficient number of sets" (the "Augenfarbentafel" of Prof. Martin costs about \$16). Nor were the "standards" for the determination of the skin-color used.

On page 34 of his report Boas says that he copied the full records which have been kept in the Newark Academy for many years. He gives a blank used for recording the measurements in this school but he does not state *how many* pupils were measured, *who* measured them, *what* was the method in measuring the "stature," "weight," "grip," "color of eyes," "hair," "skin," "length of head," "width of head," and "width of face." Again Boas says that he used this record for the sake of studying the "American families settled in this country for several generations and living under more favorable conditions." Do results of his report include the results of these records? If these records refer to the American-born Hebrew and Sicilian boys, from what tables can we see this fact? Did he treat the results of his staff together with these strange records?

On page 34 of his report Boas says that "in the schools it was necessary to obtain statistical information from the parents." He gives a blank for collecting this information but he does not state who filled out those blanks—the members of his staff, teachers, parents, or children. As the blank includes the following headings:

"I . . . came to America . . . years ago; in the year . . . My father came to America . . . My mother came to America . . . Father's father . . . Father's mother . . . Mother's father . . . Mother's mother came to America . . .," there is room for the suspicion that these blanks were filled in by children.

6. Another difficulty in Boas' theory of the head form is that *he explains it by the use of means to which, I claim, he is not entitled.* On page 11 of his report he gives three sketches of head form which are reproduced in the accompanying figure (fig. 56).

In the upper row there is "the more rounded" head form of the foreign-born Hebrew (1), and "the more elongated" head form of the Sicilian (2). Below these two there is a form of the head of the descendants of the Hebrews and Sicilians born more than 10 years after the arrival of their mothers (3). Careful study of these three

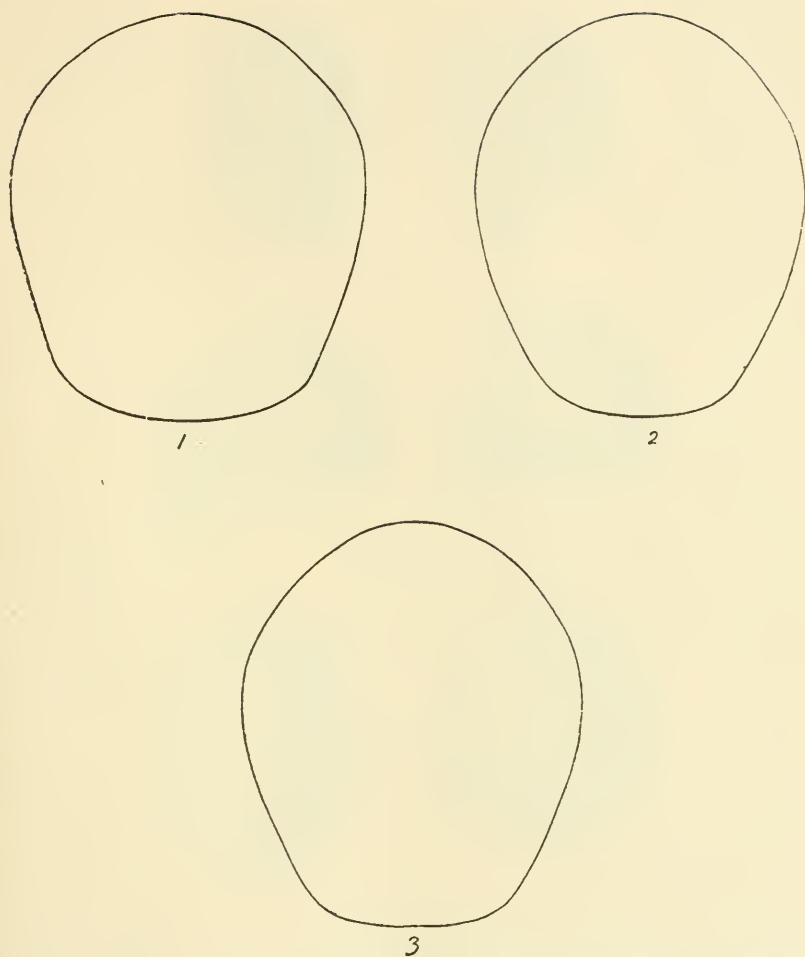


FIG. 56.—Slightly reduced from Immigration Commission Rep., Senate Doc. No. 208.

sketches will show that their cephalic indices are of the same type; all three represent brachycephaly, since the length of each of the three (original) sketches is almost the same (56 mm.), and the width 49, 46, and 46 mm. respectively. The corresponding indices of these sketches is above 82, representing the same type of head form. The slight difference is one of degree only; and, if we take into account the possible errors in such delicate head measurements, and especially if we have in mind the difficulties above mentioned, we may be

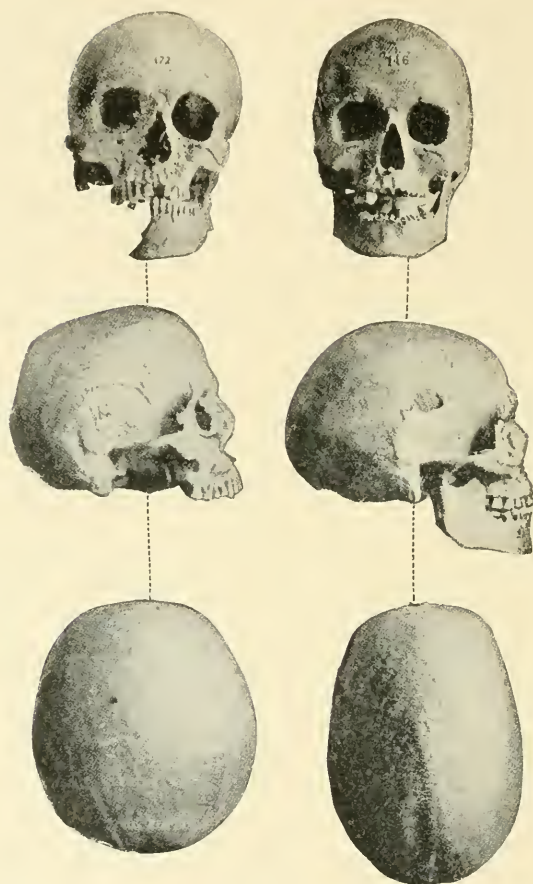


FIG. 57.—Upper, front, and side views of skulls of the Long and Round Barrow Races, photographed by A. C. Haddon from specimens in the Cambridge Anatomical Museum. On right, Long Barrow, Dinnington, Rotherham. Length, 204; breadth, 143; cran. index, 70.1; male. On left, skull of a man of the Round Barrow Race, from a secondary interment, two feet below the surface, in a *long barrow*, Winterbourne Stoke. Length, 177; breadth, 156; cran. index, 88.1. (Reproduced from Haddon's *The Study of Man* by courtesy of G. P. Putnam's Sons, New York.)

justified in doubting whether these differences are due to the effect of "financial panics" or "American soil."

But these sketches were made so that they give an impression of "more rounded" and "more elongated." This impression is not due to the mere ratio between length and width of head but

to the shape of head *as viewed from above*. And then, in his plan of investigation he did not use this, Sergi's "natural system" of classification of the shape of head. He did not even measure either the total horizontal circumference, or the forehead (the smallest width of forehead), or any other part of the head form, except the length and width of the head. These sketches of head forms are, therefore, based not on his measurements but on pure imagination. According to Sergi's natural classification, the head form may be "ellipsoides," "ovoides," "pentagonoides," "sphenoides," etc. (74) but not "more rounded" or "more elongated." To show the reader what a "more elongated" and "more rounded" skull really means, we will use the accompanying figure from Haddon (75) (fig. 57). In Boas' sketches there are no "more elongated" head forms but all of them are of the same brachycephalic type, more or less broad. There is no reference either to Sergi's demonstration that a head which, according to the measurements of the cephalic index ought to be of dolichocephalic type, might be of brachycephalic type and *vice versa*, or to Manouvrier's (76) theory that the variations of the cephalic indices are the most insignificant physiologically.

7. Attention must also be called to Professor Boas' *citation of authors*. He has apparently overlooked almost all the new anthropometrical movements outside of America, and it would seem from his references that his reading here has been uniquely restricted. He mentions the names of few authors (Gould, Baxter, H. P. Bowditch, C. W. Crampton, M. Fishberg), and gives only one reference (p. 38). This quotation is of such a nature that we can not see any special scientific reason for quoting one authority and not the works of other authors mentioned also.

Further, on page 46 Professor Boas says:

"In all races of man the head becomes slightly longer with increasing age, so that a young son is always more round-headed than his father."

He does not state who discovered that fact nor does he give any references. He states this result in a categorical manner. But the fact is that authorities do not agree on this point and dogmatic assertion is misleading. So, for example, Weissenberg (77), who

studied Russian Jewish children *en masse*, found the following indices: 86.4 (for 3 newborn children), 84.7 (for 4 five year old children), 84.0 (for 25 ten year old), and 82.5 (for 100 "grown" children). But such regular decreases were not proven by any other author. And then the number of Weissenberg's cases is too small to draw any general conclusions from, especially if we take into account that he did not measure the same children from year to year. Landsberger, who measured the same children yearly (from 1880-1886) found an average yearly *increase* of 1.0 in cephalic index. Lucae (78), who studied 20 boys from their third to their fourteenth year, found a slight decrease of cephalic indices in 16 boys; in one case the cephalic index was the same from six to ten years of age, and in three cases there was an increase from year to year. O. Ranke, who studied a large number of children, could not establish Weissenberg's results. Lecourtois (79) and Bonnifay (80) agree with Ranke. Lecourtois, on the basis of his own measurements, claims that the cephalic index of a newborn infant remains constant throughout life. Bonnifay found rather a slight increase of the cephalic index with age. Gray (63) in his Aberdeen report remarks that the cephalic index was less in the older than the younger girls, but in boys it was the same at all ages tested between six and fifteen years.

The comparison of the results of our Table I will show clearly that Weissenberg's regularity of decrease in the degrees of cephalic index (not in cephalic type!) is not proven. And even the supposed "general irregularity" of West and others is of doubtful scientific value, because these "general regular increases" may be due not to age or any "law" of the cephalic periodicity (similar to the periodicity in the body growth) but to countless mistakes and errors in measurements, comparisons, and mathematical calculations. Some biometricians and experimental psychologists make a fetish of figures. Mathematical calculations in anthropometry and experimental psychology, as also in experimental pedagogy, are of fictitious value if we do not know exactly the nature of their *modus operandi* and the exact value of their "units."

All that we can say from these "general regularities" is that the

type of the head form is not materially affected by age; it is always either brachycephalic or mesocephalic. That these differences may be due to methodological mistakes and personal equations was proven by Binet (31), who measured the same pupils with the same instruments on several days, and found differences in results. He also compared his results with those of three well-known French anthropometricians, Manouvrier, Deniker, and Lapique, who used the same instruments (compass-glissière à triple graduation), and measured the same pupils on the same day, and found that the results did not agree. Gray (63) found that the measurement with Hepburn's callipers was uniformly greater than the measurements with Hay's instrument. All these facts are only an additional reason why the cephalic measurements must be taken not once or twice in succession, but five, ten, or even more times, until the difference required of these measurements is limited to about 0.5 to 1 mm.

Yes, the two common head measurements (length and breadth) are not in themselves difficult, but they require a good deal of attention, patience, and perseverance. Anthropometrical and cephalometric work is like all other work: the more attention is paid to its details, the better results it yields.

V. GENERAL SUMMARY

To summarize then, the main objections to the new theory of Boas are:

1. *That his theory of the head form does not agree with his actual results.* From his tables we see that all Hebrews (born in America and in different countries of Europe) are of the same sub-brachycephalic type. Not one age, not one sex, not one individual of Hebrew nativity is represented either by dolichocephalic or by mesocephalic type. The same is true in its way of the Sicilians measured. They are of a high mesocephalic type, both in America and in Europe.

2. *That the normal differences in degree of these two types are probably not due to the "American soil" or "financial panics," as Boas maintains, but to the countless methodological, technical, and mathematical difficulties which we have shown.* It is a well known fact that even

specialists, experienced in technical methods of measurement, can make serious mistakes in measuring the same head, if they have not taken the precaution to harmonize their methods at the beginning, while Boas' results are based not on his own measurements but on those of thirteen amateurs. It is also interesting in this connection to note Boas' own statement, that the work of his staff "had to be pushed with considerable energy," "owing to the necessity of collecting material *in time* for the present report."

3. *That his method in collecting scientific data is uncritical; he fails to state exactly the points from which measurements were made, to explain his modus operandi, or to give an objective account of the previous theories of the head form, while there are many errors and inconsequences in his tables.*

4. *That his theory is based rather on a cross-section of the facts than on a genetic interpretation of them. It is only a genetic description and explanation of them that can give a trustworthy basis for a theory.* "Durch das Werden wird das Gewordene klar." What we also need in physical anthropology is to learn the methods and grammar of physical anthropology in relation to historical, evolutionary facts. Boas ignores all previous theories of head form, even the American biological (G. Stanley Hall) and sociological (Ripley) interpretation of this large subject.

5. *That he began and finished the investigation in which he was put in general charge without requisite scientific exactness and care.* In the "Introductory" to his report we read the following:

"A small appropriation was made to test the question and see if the promise of results was sufficient to warrant the continuance of the investigation. *Almost immediately* it became evident that there might be much value in such a study, and the work has therefore been continued, although as yet only on a small scale."

It is to be regretted that he does not state on what grounds it became "almost immediately" evident.

The "mystery" of New York environment could be partially solved either by repeating the same measurements on the same subjects and correcting the tables or by attacking this big problem with less temper, but on a really new, scientific plan, which can stand any professional criticism. This was and is the only way to

save both the public and science from prejudicial, provincial, and narrow theories.

To conclude: *I contend that the theories advanced by Boas in regard to physical changes in the immigrants to the United States and their children neglect the various influences which, in different degrees, affect different subjects in the tests, and pours all data from whatever source into the statistical mill, which in consequence expresses an anthropologically meaningless result.*

VI. BIBLIOGRAPHY

1. Boas, Franz. Changes in bodily form of descendants of immigrants. Washington, Government Printing Office, 1910, p. 112 (The Immigration Commission, Senate Document No. 208).
2. Darwin, Ch. Descent of Man, vol. I, p. 82.
3. ——. Variations of Animals, vol. I, p. 117.
4. Welcker, H. Kraniologische Mittheilungen (Archiv für Anthropologie, I, 1866, 89/160).
5. Nyström, A. Über die Formänderungen des menschlichen Schädels und deren Ursachen. Ein Beitrag zur Rassenlehre. (Arch. f. Anthropol., XXVII, 1902, 211/31, 317/36).
6. Holden. Human Osteology. Edited by Ch. Stewart and R. W. Reid, London, Churchill, 1897, pp. 150-153.
7. Cuvier. Recherches sur les ossements fossiles, 1822, II, 231 (after Holden, pp. 153, 349).
8. Müller, A. Über die wechselseitige Beziehungen zwischen Kopfform und Geburtsmechanismus (Archiv für Gynäkologie, vol. 82).
9. Görke, O. Beiträge zur functionellen Gestaltung des Schädels bei den Anthropomorphen und Menschen durch Untersuchung mit Röntgenstrahlen (Arch. für Anthr., I, 1903, 91/108).
10. Papillault, G. Ontogénèse et phylogénèse du crane humain (Rev. d'école anthr., IX, 1899).
11. Haeckel, E. Unsere Ahnenreihe (Progonotaxis Hominis). Kritische Studien über phyletische Anthropologie, Jena, Fischer, 1908.
12. Osburn, R. C. The effects of brachycephaly and dolichocephaly on the teeth of man (Am. Orthodontist, II, 1911, 113/24).
13. Myers, Ch. S. Contributions to Egyptian Anthropology (Jour. Anthr. Institute, London, XXXIII, 1903, 82/90; XXXV, 1905, 80/92; XXXVI, 1906, 237/72; XXXVIII, 1908, 99/148). Tucker and Myers, Contribution to the Anthropology of the Suddan (Ibid., XL, 1910, 141/64).
14. Spitzka, E. A. Hereditary resemblances in brains of three brothers (Amer. Anthropologist, VI, 1904, 307/13); A preliminary communication of a study of the brains of two distinguished physicians, father and son (Proc. Assoc. Am. Anatomists, 1900, 70/92); A study of six eminent scientists

- and scholars belonging to the American Anthropometric Society together with a description of the skull of Prof. E. D. Cope, Philadelphia, 1907.
15. Möbius, P. Geschlecht und Kopfgrösse, Halle, 1903 (Beiträge zur Lehre von den Geschlechtsunterschieden, 5. Heft).
 16. Rieger. Über die Beziehungen des Schädellehre zur Physiologie, Psychologie und Ethnologie, Würzburg, 1882; Eine exacte Methode der Kranio-graphie, 1885.
 17. Hall, G. Stanley. Adolescence, vol. I, 1904, p. 73.
 18. Zupanchich, N. Concerning Physio-ethnology ("Prosvetni Glasnik," Belgrade, 1909, p. 144/61; Serbian).
 19. Lapouge, G. V. de. L'Aryan. Son rôle sociale. Paris, Fontemoing, 1899, xx + 569.
 20. Oettking, B. Kraniologische Studien an Altägyptern. Diss. Braunschweig, Vierweg, 1908, pp. 90.
 21. Keith, A. The Briton of 170,000 years ago: the Galley Hill Man (The Illustrated London News, March 4, 1911, 304).
 22. Gorjanovich-Kramberger, K. Der paläolithische Mensch und seine Zeitgenossen aus dem Diluvium von Krapina in Kroatien (Mitteilungen der anthropol. Gesellschaft in Wien, 1901, 163/247).
 23. M. M. Theories of Dr. N. Zupanchich of the prehistorical inhabitants of the Balkan Peninsula and neighbouring regions ("Pregled," Sarajevo, Bosna, 1911; Serbian).
 24. Ranke, O. Anthropometrische Untersuchungen an gesunden und kranken Kindern mit besonderer Berücksichtigung des schulpflichtigen Alters (Zeitschrift für Schulgesundheitspflege, XVIII, 1905, 719/45, 816/37).
 25. Webster's Dictionary, 1907, pp. 488. (Harris' edition).
 26. Vosilyev, V. F. Measurements of head and face in relation to stature and age in the school children, Moscow, 1899 (Russian).
 27. Pfitzner, W. Social-anthropologische Studien (Zeitschrift für Morphologie und Anthropologie, I, 1899, 325/77).
 28. Boas, F. Heredity in head form (Am. Anthropologist, v, 1903, 530/8); The form of head as influenced by growth (Science, iv, 50/1); Heredity in anthropometric traits (Am. Anthropol., ix, 1907, 453/70).
 29. Ranke, O. Beiträge zur Frage des kindlichen Wachstums. Anthropologische Untersuchungen ausgeführt an holsteinischen Kindern, von der Geburt bis zum vollendeten 15. Jahre (Archiv für Anthropologie, III, 1905, 161).
 - 29a. Thorndike, E. L. Measurements of twins. New York, 1905, pp. 37-39.
 30. Gray, J. and Tocher, J. F. The physical characteristics of adults and school children in East Aberdeenshire (Journ. Anthr. Institute, xxx, 1900, 104/24).
 31. Binet, A. Recherches sur la technique de la mensuration de la tête vivante (L'Année Psych., vii, 1901, 314); Corrélation des mesures céphaliques (Ibid., viii, 363).
 32. Tscherowskovsky, E. Contribution to the study of heredity and variation in the different anthropological types, St. Petersburg, 1905 (Russian); Über

- die Vererbung des Kopindex von seiten der Mutter (Korrespondenzblatt der deutschen Anthrop. Gesellschaft, München, xxxiv, 1904, 172).
33. Viasemsky, N. W. *Résumé de l'ouvrage sur les modifications de l'organisme de 10 à 20 ans . . .* Paris, Marthieux, 1902. (A study of 4,872 school children of St. Petersburg).
 34. Chamberlain, A. F. Some recent anthropometrical studies (Ped. Seminary, VIII, 1901, 239/57).
 35. Matiegka, H. Über die Beziehung zur Körperbeschaffenheit und geistigen Tätigkeit bei den Schulkindern (Mitteilungen der Anthrop. Gesellschaft in Wien, xxviii, 1898, 122/6); Stature, development and health of school children in Prague. Prague, 1896, 78 (Bohemian).
 36. Engelsperger and Ziegler. Beiträge zur Kenntnis der physischen und psychischen Natur des sechsjährigen, in die Schule eintretenden Kindes. I. Anthropometrischer Teil (Meumann's Zeitschrift für die Experimentelle Pädagogik, 1905, 173/235).
 37. Schliz, A. Eine Schulkinderuntersuchung zum Zweck der Rassenbestimmung nach Farbencomplexion und primären Körpermerkmalen (Archiv für Anthropologie, xxvii, 1902, 191).
 38. Teumin, S. Topographisch-anthropometrische Untersuchungen über die Proportionsverhältnisse des weiblichen Körpers (Archiv für Anthropologie, xxvii, 1902, 379/432).
 39. Browne, C. R. Report of the Work Done in the Anthropometric Laboratory of Trinity College, Dublin from 1891 to 1898 (Proceed. Royal Irish Academy, Ser. 3, vol. 5, 1899, 269/93).
 40. Venn, J. Cambridge Anthropometry (J. Anthr. Institute, London, xviii, 1888, 140/54).
 41. Kraitschek, G. Die anthropologische Beschaffenheit der Landskroner Gymnasialjugend (Jahresbericht des K. K. Staats-Obergymnasium in Landskron, 1901).
 42. Hrdlička, A. Skeletal Remains suggesting or attributed to early man in North America (Smithsonian Institution, Bureau of American Ethnology, Bulletin 33, Washington, 1907. See pages 12 and 13, especially); Measurements of the cranial fossæ (Proceedings U. S. National Museum, xxxii, No. 1521); Physiological and medical observations among the Indians of Southwestern United States and northern Mexico (Smithsonian Institution, Bureau of American Ethnology, Bulletin 34, Washington, 1908); Report on Anthropological Work in the State Institution for feeble-minded children, Syracuse, N. Y., 1899.
 43. Klaatsch, H. The Skull of the Australian Aboriginal (Reports from the Pathological Laboratory of the Lunacy Department, New South Wales Government, vol. 1, part 3, 1908, pp. 43/167).
 44. Kollmann, J. Der Schädel von Kleinkems und die Neandertal-Spy-Gruppe (Archiv für Anthropologie, v, 1906, 208/27).
 45. Martin, R. Die Inlandstämme der malaischen Halbinsel. Wissenschaftliche Ergebnisse einer Reise durch die vereinigten malaischen Staaten.

- Jena, Fischer, 1905, pp. 1052 + 137 Textabbildungen, 26 Tafeln + 1 Karte. Martin's long expected Lehrbuch der Anthropologie is in print.
46. Deniker, J. The Races of Man: An Outline of Anthropology and Ethnography. London and New York, Scribner's Sons, 1907. (Translation from French.)
 47. Ripley. The Races of Europe, a Sociological Study. New York, Appleton, 1889; Notes et Documents pour la Construction d'une Carte de l'Indice Céphalique en Europe (L'Anthropologie, VII, 1896, 513); The European Population of the United States (J. Anthr. Institute, London, XXXVIII, 1908, 221/4).
 48. Beddoe, J. The Somatology of eight hundred boys in Training for the Royal Navy (J. Anthr. Inst., XXXIV, 1904, 92/100).
 49. Ammon, O. Die natürliche Auslese beim Menschen. Auf Grund der Ergebnisse der anthropologischen Untersuchungen der Wehrpflichtigen in Baden und anderer Materialien dargestellt. Jena, 1893; Zur Anthropologie der Badener. Statistik über rund 30,000 Wehrpflichtigen und Gymnasiasten, 1899.
 50. Demolins. A quoi tient la supériorité des Anglo-Saxons, Paris, Didot, 1897.
 51. Ranke, J. Frühmittelalterliche Schädel aus Lindau (Sitz. der bayer. Akademie der Wissenschaften, 1897, XXVII). After Lapouge's L'Aryen, 1899, pp. 338.
 52. Weisbach, A. Beiträge zur Kenntnis der Schädelformen österreichischer Völker (Mediz. Jahrbücher der Gesellschaft der Ärzte in Wien, Jahrgang, 1864, 119/54; 1867, 1/120); Die Oberösterreicher (Mitteil. Anthropol. Gesell. in Wien, XXIV, 1894, 232/46).
 53. Livi's distribution of the cephalic indices for Italy is given by Lapouge, L'Aryen, 1899, pp. 441, 443. See also Ripley, Races of Europe, 1899, pp. 41.
 54. Topinard, T. Anthropology. English Translation by R. T. H. Bartley, London, 1890, pp. 237.
 55. Hrdlička, A. Anthropometrical Investigations on One Thousand White and Colored Children of Both Sexes, the Inmates of the New York Juvenile Asylum, With Additional Notes on One Hundred Colored Children of the New York Colored Orphan Asylum (47th Annual Report of the New York Juvenile Asylum, New York, 1899, pp. 86); Physical Difference between White and Colored Children of the Same Sexes and the Same Ages (Proc. Amer. Ass. Sci., XXVII, 1898, 475/6). See also his measurements of Indian children in Bull. 34, Bureau of American Ethnology.
 56. Hoesch-Ernst, L. Anthropologisch-psychologische Untersuchungen an Züricher Schulkindern nebst einer Zusammenstellung der Resultate der wichtigsten Untersuchungen an Schulkindern in andern Ländern (Meumann's "Das Schulkind in seiner körperlichen und geistigen Entwicklung, I. Teil, Leipzig, Nernich, 1906).
 57. Landsberger. Das Wachstum im Alter der Schulpflicht (Archiv für Anthro-

- pologie, xvii, 1888, 229/64); Das Wachstum der Knaben vom 6. bis zum 16. Lebensjahre (*Zeitschrift für Schulgesundheitspflege*, i, 1888, 65/9).
58. Ranke, O. Anthropometrische Untersuchungen an gesunden und kranken Kindern mit besonderer Berücksichtigung des schulpflichtigen Alters (*Zeitsch. f. Schulgesundheitspflege*, xviii, 1905, 719/45, 816/37).
 59. Reuter, F. Beiträge zur Anthropologie Hinterpommerns. Eine Schulkind-eruntersuchung in Pollnow (*Arch. f. Anthr.*, xxviii, 1903, 1/91); Kopfform und Körperbau (*Archiv für Rassen und Gesellschafts-Biologie*, v, 1908, 449/77).
 60. West, G. M. Anthropologische Untersuchungen an Schulkindern in Worcester, Mass. (*Archiv für Anthropol.*, 1893); Worcester (Mass.) school children; the growth of the body, head and face (*Science*, N. Y., xxi, 1893, 2/4).
 61. Windle. On the physical characters of a group of Birmingham pupil teachers (female) (*Proc. of Birmingham Nat.-hist. and Phil. Soc.*, 1895).
 62. Muffang, M. H. Écoliers et étudiants de Liverpool (*L'Anthropologie*, Paris, 1899, 21/41).
 63. Mackenzie, W. L. The Medical Inspection of School Children. Edinburgh and Glasgow, Hodge & Co., 1904, pp. 395; Observations on physical characteristics of children and adults taken at Aberdeen in Banffshire, and in the island of Lewis (*Rep. Brit. Asso. Adv. Sci.*, 1897. London, 1898, LXVII, 506).
 64. Retzius. Ethnologische Schriften. Stockholm, 1864. After: L. Milykovich The Science of Man: Somatology and Anthropology. Belgrade, Serbian Government Printing Office, 1891, pp. 385.
 65. Török, A. Versuch einer systematischen Charakteristik des Kephalexindex (*Archiv für Anthropologie*, 1905, 110/29); Reform der Kraniologie (*Int. Monatsschrift f. Anatomie und Physiologie*, vol. xi); Grundzüge einer systematischen Kraniometrie, Stuttgart, 1890.
 66. Fishberg, M. Physical Anthropology of the Jews. 1. The Cephalic Index (*Amer. Anthropologist*, 1902, 684/706).
 67. Martin, R. Anthropometrische und Craniometrische Technik. Zurich, Füssli, 1903, pp. 6.
 68. Wissler, C. Correlation of Mental and Physical Tests (*Psych. Rev.*, Monogr. Suppl., Whole No. 16, 1901).
 - 68a. Schwerz, F. Untersuchungen über das Wachstum des Menschen (*Arch. f. Anthropol.*, x, 1911, pp. 1-38).
 69. MacDonald, A. Experimental Study of School Children. Washington, D. C., Government Printing Office, 1899.
 70. Bertillon, A. Signaletic Instructions. Chicago, New York, and London: The Werner Co., 1896, pp. 107.
 71. *Archiv für Anthropologie*, xv, 1883.
 72. *L'Anthropologie*, Paris, xvii, 1906, 560/572.
 73. Quetelet. Anthropométrie ou Mesure des Différentes Facultés de L'Homme. Bruxelles, 1870.

74. Sergi, G. Die Variationen des menschlichen Schädels und die Klassifikation der Rassen (*Archiv für Anthropologie*, III, 1905, iii/22). Translation from Italian.
75. Haddon, A. C. *The Study of Man*. London, Bliss, Sands & Co., 1898, plate 1, pp. 64.
76. Manouvrier, L. L'indice céphalique et la pseudo-sociologie (*Rev. l'école d'anthrop.*, Paris, IX, 1899).
77. Weissenberg, S. Die südrussischen Juden. Eine anthropometrische Studie (*Archiv für Anthropologie*, XXIII, 1895, 347/425, 531/81).
78. Lucae, J. Ein Beitrag zum Wachstum des Kindeskopfes von 3.-14. Lebensjahre (*Festschrift der 13. Jahresversammlung der deutschen anthropologischen Gesellschaft zu Frankfurt a. M.*, 1882).
79. Lecourtois. Bulletin de la Société d'Anthropologie, 1869, pp. 720; *Forme du crâne dans l'Hydrocéphalie* (*Rev. mensuelle des maladies de l'enfance*, 1894).
80. Bonnifay, J. Du développement de la tête au point de vue de la céphalométrie depuis la naissance jusqu'à l'âge adulte. Thèse de Lyon, 1897.

NEW YORK UNIVERSITY,
NEW YORK CITY.

DESCRIPTION OF A WINNEBAGO FUNERAL¹

By OLIVER LAMERE AND PAUL RADIN

ON the first day of June, 1911, there died in Winnebago, Nebraska, Mr J. M., a prominent member of the Winnebago tribe and a member of the Bear clan. In accordance with the old Winnebago customs, the first individual to be notified of the death was Mr J. F., a member of the Wolf clan.² To Mr F. fell the lot of taking charge of all the funeral rites—dressing the deceased, laying his body in the casket, burying him, and finally, of conducting the elaborate funeral wake lasting four nights.

One of Mr F's most important duties is to invite the brave men or warriors³ who play such an all-important part in the wake and

¹ The following description of a Winnebago funeral is based almost entirely on the notes taken by Mr Lamere some months ago, at the funeral of a prominent member of his tribe. Dr Radin's work has been confined to editing these notes and adding additional observations wherever, in his opinion, they were needed for the better understanding of the rites in question.

² According to the Winnebago social organization every clan is paired off with another one, which it calls "friend" (*hitcakaro*). These friendship-groups have reciprocal duties to perform, the most important of which are those relating to the burial of one another's members. They are expected to show the strictest courtesy to one another, may at times exchange clan names, and are at all time forbidden to intermarry. The friend clan of the Bear is the Wolf and that is why Mr F. was called upon to take charge of the funeral obsequies in this particular case. If it is impossible to obtain a member of the Wolf clan, one of any other clan may be called, and, if even that is impossible, it is permissible to select a member of the Bear clan itself, for, as disagreeable as this may be, it is distinctly less disagreeable than not burying a person or omitting to perform those rites that are essential for the welfare of his soul.

³ Warriors are invited to the wake because, according to Winnebago beliefs, the souls of the enemies they have killed become their slaves in spirit-land and they can order them to take charge of the soul of the recently departed individual, and clear his path of the obstacles that beset him on his journey from the land of the living to that of the spirits. Especially difficult to the passage of the soul is an enormous girdle of fire which it must be carried over to reach the spirit home of its clan. The warrior relates his war experiences, but in so doing he is strongly admonished to be very careful and not tell them in a boastful way or to exaggerate in any detail, for if he does so the soul of the departed would fall into the abyss of fire. In this connection it may perhaps be suggestive to note, that it is not any transgression of the deceased that prevents him from reaching his goal but a transgression of the warrior relating his war experience.

likewise to extend invitations to all who wish to participate in the feast. After the body has been buried, he goes to the home of the deceased and takes away all the household goods that the deceased has been in daily contact with, especially his bed and bedding and his clothes.

In addition to F. another man was sent for, Mr A. W., also a member of the Bear clan. He went through the Bear clan ceremony which was as follows. When the deceased was fully dressed in his Indian clothes and just before he was to be laid in the casket he walked up to him and, taking some paint from a little bundle he carried, he painted a red mark across his forehead, then a black one with charcoal immediately below this one, and finally he daubed his entire chin red. When he was through with this preliminary work he addressed those present as follows:

"You relatives, all that are seated here, I greet you. This ceremony is not anything that we have originated ourselves, but it was known to be the proper thing to do by our ancestors. It is for that reason that I have made the markings upon the face of my son, in order that he may be recognized by his relatives in spirit-land. And I have also given him the material with which he may talk, *i. e.*, tobacco,—that with it he may entreat the spirits to grant all those years that he fell short of¹ to his relatives still living.

"Now, it is said, that the members of the Bear clan hold death as a blessing and not as anything to be mournful over. I do not mean that I do not feel sorry for the children of the deceased and that I rejoice in his death but it is the belief of the members of the Bear clan that the same happiness should come to them at death that comes to us during life when a bear is killed and brought to the village for food.²

"For now indeed my son shall walk with a road that has been cleared from all obstacles; and his claws shall be sharp; and his teeth shall be

¹ The Winnebago believe that the spirits grant to each individual a certain quota of years. By years they do not mean merely the years themselves but all that a normal individual accomplishes in his lifetime, such as the honors he acquires, the scalps he obtains, the food he eats, etc. It is to be noted that there is no belief in any fixed maximum age for mankind but that this maximum varies with each individual and consequently this request for the "unlived increment" of years is as justifiable in the case of an old man as in that of a child.

² According to some, the red marks on the chin are supposed to symbolize the joy of the individual at his death, just as if he were opening his mouth to laugh and his gums were to be seen.

sharp; and nothing indeed shall cross his path. And in this, his walk to the spirit land, he shall tread upon us the life that he has fallen short of upon this earth. And he shall walk just as the original bear clansmen walked, when they originated and when they approached this earth. And now will I sing him the songs that they sang as they came, that he may take them with him in his journey to the spirit land. And it is said that there is no other place prepared for us in the hereafter."

Then he sang the four clan songs.¹

When the songs had been sung, it was just about noon and, as dinner was ready, we all sat down and A. W. filled a pipe and, when he was ready to smoke it, he began to speak again to the following effect:

"Relatives all that are present, I greet you. It is good that this many of you have come here and it is said that the soul of the deceased remains hovering around about this place four days and we should partake of food with him for that period. It is therefore that we do this. And it is good that this many of you relatives have come here and have helped out with the food and dress for the deceased."

He then mentioned the different things that had been given by different individuals. Then he lit the pipe and took a few puffs and sent it around to the left of him. With the pipe he also passed a pitcher of water from which we each took a sip.

During the morning Mrs R. came in and combed the hair of the deceased's wife and likewise gave her a present, telling her that she hoped that through this gift she might be able to dry her tears. Another person also came in the morning bringing a gift of leggings and a blanket for the deceased to wear. He likewise brought the casket. While the body of the deceased was being prepared this person addressed those present as follows:

"Relatives all that are present, I greet you. If my nephews would sit here I would talk to them."

Then the sons of the deceased sat with their mother and sisters. Then the same person continued:

"My sister, it is said that it is best not to weep and that a widow should not mourn too much as the people would then make fun of her;

¹ These songs have been obtained in a different connection and will appear in a subsequent publication.

as well as for the reason that you have children and for their sakes you should look forward to life and live for them. And it is said that we should keep up this (mourning) for at least four years. And indeed there is nothing funny about this that I am going to say, namely that we should not cry, but instead keep up a good spirit. I do not mean that I am glad that my brother-in-law is dead. But even though you may weep, some one might come in and say that it behooves you more to show them your teeth than your tears. By this they mean that you should smile.

"And again it is said that one should not cry, because when a body is laid in the ground there is no more hope of its ever returning again. Now indeed, my nephew, the one that has been advising you in your daily affairs has ceased to breathe and you are the only ones left to look after yourselves, your little brothers, and your mother; and therefore you should love one another and do your mother's bidding."

While we were eating C. P. came in and spoke as follows:

"Relatives, all that are present, I greet you. It is good that you all have come here and are comforting this house of mourning. It is good that J. H. has brought a casket and also brought clothing for the deceased to wear and food for the people to use during the four nights' wake. And indeed he has also promised a hog for the four nights' feast. He did not do this in order that he might boast of it in public but nevertheless how can anyone help oneself in expressing one's thanks. My brother likewise came with the intention of furnishing some of these things but, inasmuch as J. H. has furnished them beforehand, he placed ten dollars in the hands of the deceased's wife. He did not, however, tell her for what purpose he gave her the money and I, therefore, take the liberty of telling her that the gift is meant for anything that she might desire to buy. Now my relatives, this is no time for happiness, but I am glad, nevertheless, that so many of our relatives are present and I am thankful for what you have done. I greet you all."

Then the casket was placed in a spring wagon and taken to the Winnebago cemetery. When we got there the casket was lowered into the grave. When this was over A. W. spoke as follows:

"Relatives you all that are present, I greet you. This many of you have followed my son to this, his last resting place. Further than this, he has ceased to walk in this life. And truly, this many of you have felt sorry for him. All the ceremony that has been taught me I have already said and I have already gone through the same. And I have given him

the emblem and the material to talk with and therefore he will plead for us, his relatives, when he gets to the end of his journey, that we may live the life he fell short of on this earth, and that he may tread firmly upon us, as he walks to the spirit-land. All this I have said before, but nothing was taught me to say at the place where we are now, except that we should step over the grave just as our forefathers did when they originated. They were holy and they entered this life on a perfect day just as this one is today, and, inasmuch as they were holy, all the ground that they touched was also holy and therefore we should step over the grave."

Then we stepped over the grave. We then went to our respective homes.

That same evening the four nights' wake began.¹ When all the invited guests had arrived and were seated, the feast was spread before them. Then A. W. spoke as follows:

"Relatives, all that are seated here, I greet you. It is good that this many of you have come tonight. You know that we are not creating any new ceremony but are simply following up what our forefathers have learned to be true and good. And, as it is said that we should not weep aloud, therefore you will not hear any of us making any utterings of sorrow. And even though we may be silently weeping, should any one come up to us, we will look upon him smiling. We therefore beg of you not to think any the worse of us should you find us happy in mood. And now I am ready to turn over the tobacco and water to J. F. Thus I express my thanks to you all that are present."

Then J. F. took the tobacco and water and spoke as follows:

"Relatives, all that are present seated here, I greet you. It is good that so many of you have come to our humble affair and, as our ancestors have learned that this was the proper way to do, so am I glad that it was given to me to handle the corpse as I am certain that I will be strengthened by it. I will now pass the tobacco to Mr X. He is a brave man and he will light the pipe and pass the water before we eat and after

¹ According to Whitebreast, now deceased, the wake originated as follows. Once upon a time, long ago, a man died and four warriors got together and decided to go to the people of the deceased and comfort them and make them think of other things besides their sorrows. They therefore went to them and told of their war experiences.

The above "explanation" of Whitebreast which Mr Lamere embodies in his notes is unquestionably a fragment of the origin myth of the wake as given by the Bear clan. It does not, however, correspond in any detail to the version told by his nephew and collected by Dr Radin.

supper he will tell the deceased a route to the spirit-land. Now I thank you and I greet you."

Then the brave man took the tobacco and filled the pipe and, after taking a few puffs from it, passed it to the left and it thus went around, each person taking a puff from the pipe and a sip from the pitcher of water. Then the feast began. When it was over and all the dishes were cleared away and every one was properly seated then the brave man greeted them again:

"Relatives, I greet you. As we are not creating anything new and as it has been known to be good by our ancestors and as it is said that if anyone exaggerates a story in a case like this it will cause the soul to stumble, therefore I will tell my war experiences to my relative (the deceased) exactly as I remember them. I greet you all."

He then proceeded to tell his war experiences. When he had finished he spoke as follows:

"Relatives that are present I greet you. As I have said before, I do not wish to cause the soul of my recently deceased relative to stumble and I have tried to tell my story as accurately as I could. It is said that the souls of the ones killed in battle are at the mercy of the victor and I therefore command the souls of the ones I have killed to lead and guide my relative safely through spirit-land. I greet you all."

He then passed the tobacco to another brave man present who in his turn greeted those present and related his war experiences. After two warriors had told their war experiences they stopped for the night, to continue on the second night. The second and third nights were the same as the first. About the evening of the fourth night, when all the people invited were present, A. W. spoke again in the same strain as on the first night, and when he had finished he passed the management of the feast to J. F. The latter then passed it to F. This one now lit the pipe and passed it around together with the water. All partook of the feast then. After supper A. W. reported all the donations that were made to them naming each giver and the amount of the gift and thanking them and praising them for their generous gifts. Then F. told the soul the route it must take in its journey to the spirit land and how it

must behave at different places on the path.¹ Then a warrior told his war experiences and after thanking the people passed the tobacco to the next warrior who in turn related his war experiences.

The amount of gifts was then figured out and they tried to arrange matters so that the warriors were through with their stories about midnight. At midnight games were played with the donations as prizes. The gifts generally consisted of twelve three-yard calico pieces or money equal to that amount of calico, twelve strings of beads, etc. These were the gifts used as prizes. Other donations of food were made for the four nights' feast. A. W. was in charge of the games and he likewise designated what games were to be played. They generally play the games the deceased was fond of, so in this case they played the moccasin game and cards. After all the donations were exhausted and the games finished a brave man was called upon to give a war whoop in thankfulness for the sun who brings the daylight and to all the spirits above and below. Then A. W. greeted the guests again and thanked them for coming and the wake was over.

In olden times the widow was supposed to continue single for four years. She is strongly admonished nevertheless not to continue in low spirits and that she shall consider herself free to act in any way that will make her happy. She is told to play games or dance or in fact do anything that will make her forget her sorrow and that no one will hold her conduct against her as disrespectful to the deceased. As this admonition is given to her by the sister or aunt of her deceased husband, the only people who could properly reproach her, namely the members of her husband's clan, it has all the more weight. This prohibition of weeping is further strengthened by the fact that it is customary to say that any woman who weeps too profusely at the death of her husband is in reality thinking, in the midst of her tears, of the one she is going to marry next. The people will then tell one another not to put themselves out

¹This story is one of the most famous myths among the Winnebago. In the Nebraska division of the tribe, for some reason or other, F. claims to have the sole right to relate it but most Indians vigorously resent this assumption on F.'s part and there can be little doubt that the right to tell this story belongs to any number of people.

too much as the widow will soon forget her mourning and show no respect to the memory of the dead but instead look after her own pleasures.¹

WITTENBERG, Wis.

¹As another and more complete account of the Winnebago wake is to appear in another place we do not wish to overburden this short sketch with too many notes. It professes to be merely the account of what an eye-witness saw on a single occasion. If there are any variations from what is generally considered as the type, this must be ascribed either to the negligence of those who performed the ceremony or to the existence of a number of different ways of performing it. Compared with other accounts of the wake of the Bear clan, the foregoing sketch contains two notable omissions, first the absence of an address to the body of the deceased as it is lying in state, and secondly the absence of the rites connected with the placing of a stick at the grave of the deceased and the counting of coup on the part of the warriors.

The differences between the wakes of the different clans seem to center principally upon the differences in the clan markings and in the objects buried with the deceased. These objects are generally the specific possessions of the clans. For instance a member of the Thunder clan is always buried with a Thunderbird club (naⁿmantce) and a member of the Bear clan with the stick emblematic of his power as a soldier and which is known as naⁿmañinixini.

ARCHEOLOGICAL EVIDENCE AS DETERMINED BY METHOD AND SELECTION

BY HARLAN I. SMITH

ARCHEOLOGICAL evidence, particularly such as is contained in specimens and illustrations, is, no doubt, often handled in such a way that it is very misleading as a basis for the reconstruction of prehistoric ethnology. This is, of course, not because of any conscious attempt to mislead but because of the particular methods of making the collections, and, in some cases, because of the practical selection of illustrations.

A collection made by a farmer's boy differs from one made by a man trained in archeological technique; one obtained by excavation from another collected from the surface. The collection gathered by a connoisseur differs from the collection made by the scientist who endeavors to obtain, in an unprejudiced and disinterested manner, the evidence, the whole evidence, and nothing but the evidence. Archeological material, being necessarily fragmentary, readily lends itself to misleading reconstruction. The selection of unique specimens for exhibition in a museum or for illustration, side by side with common objects, leads to misunderstanding unless the label or the text is carefully read. A unique specimen may be a sport, and single finds must be considered as possibly unique until duplicated. Collections from single or special sites may also be misleading.

A collection such as is made by a farmer's boy from the surface of the ground, for instance in the Ohio Valley, will probably contain many arrow points chipped from stone, a few celts pecked from stone, some grooved axes, and perhaps a perforated slate tablet, with but few other objects. One made by an experienced archeologist on the surface in the same region will also include fragments of pottery. The average farmer's boy discards these because they are broken, or because he does not recognize the potsherds as

objects of human handiwork. Sometimes he even believes them to be pieces of petrified bark.

If the archeologist makes his collection, not only from the surface, but also by excavating into such places as mounds, graves, and village sites, his collection will contain relatively few arrow-points, celts, grooved axes, and the like. It will include a large number and a great variety of objects made of bone, many of antler, and not a few of shell. There will also be fragments of pottery. The reason that a collection made from the surface by both the boy and the archeologist, contains proportionately more arrow-points than the one made by the archeologist in excavating, is no doubt partly because these objects are more easily seen on the surface of a field which has been washed by the rains of a season than they are in an excavation where they are partly covered with earth dust. The reason that the objects of bone, antler, and shell are found in excavating is that in the ground they are protected from the sun and rain. Such of them as have been left upon the surface or are brought to the surface by the burrowing of animals, the cultivation of fields, and the like, are soon cracked by the sun and frost, broken by the tread of man and beast, and finally wholly disintegrated. Possibly such objects are more easily discovered in the excavations than the arrow-points, because of their average lighter color. Celts and grooved axes are probably rare in the excavations, because they are relatively rare everywhere, and they are found in undue proportion on the surface because there all, or nearly all, the objects of bone, antler, and shell have been eliminated.

The collection gathered by a lover of specimens as such often contains art treasures, objects made of precious or semi-precious material, unique, ceremonial, or mysterious things. Usually there are few or no examples of raw materials, objects in process of manufacture, broken or repaired artifacts, or the common things which are more illustrative of the life of the prehistoric people under investigation than are the "gems" or monstrosities of the collection.

The collection made by a scientist should be obtained with an

endeavor to understand the whole life of the people, and in it the unique pieces, perhaps formerly owned by a chief or shaman, bear a true relation in numbers to the common manufactures of the whole people. Such a collection may be likened to a merchant's store of goods after he has taken his inventory and replenished his stock by filling up the gaps. Even this collection sometimes falls short for at least two reasons. The archeologist, being human, often runs into a rut and, becoming unconscious of his special interests, collects certain things at the expense of others. Moreover, he is able to obtain only those things which do not disintegrate, and what remains also requires laborious repairing and restoration. These remnants must always fail to present evidence as satisfactorily as a collection from a living people, none of whose manufactures are as yet decayed, and whose physique, language, and philosophy are all available for study.

The illustrations of archeological objects, such as are published in a report where an endeavor is made to show all the forms of a region, give a false impression as to their relative abundance. A unique specimen of course must be figured, whereas there is no need of going to the expense of figuring duplicates of the more common objects, although several specimens may be used to show the range of size and individual variations. Nevertheless a unique object has a visual presentation far greater than its relative abundance warrants. This is a practical problem due to the expense of making and printing illustrations. Any false idea gained by glancing at the illustrations and neglecting the text can be corrected only by carefully reading the latter.

The same general idea holds good in regard to museum exhibits. There is a practical difficulty in the way of exhibiting a very great number of exact duplicates. No one would retire a unique specimen although exhibited together with only three or four common specimens, for fear that it would give the impression that there was one of these to every three or four of the others, even though the real proportion might be one to ten thousand. There are practical reasons for the method of selecting illustrations and specimens for exhibition, but in carrying on investigation one must also take

into consideration facts not shown by the museum exhibits or the illustrations.

A unique specimen may be the single great production of a great artist, or it may be only the offspring of an idle moment, made without serious consideration and perhaps by an abnormal individual—a mere freak, unworthy of consideration in the study of native craftsmanship. If, in making a collection in the field, we are satisfied to end our search for each kind of object as soon as one example is secured, it will never be known whether such an object is the common everyday tool of the people, or a freak, or again the unique product of a master hand.

A collection from a single or peculiar site may lead to an entirely erroneous conclusion if one is satisfied with the results obtained in this one kind of place. For instance, objects from a grave—which may be that of a man, woman, or an infant—may be both characteristic only of grave finds, not typical of the whole culture of the people, and also peculiar to males, females, or infants, as the case may be. Again collections from the part of a village site near the water do not permit us to generalize with regard to the life of the people. The objects found in such a peculiar site may have been the property of a certain peculiar type of individual—a potter, metal-worker, or shaman—or of a class of individuals—fishermen, women, or children. It may be that the children always played in that part of the village, and that these objects were used only by the children. A collection made a few miles away might give one a widely different impression of the same material culture. A collection from one of our own fishing villages would give one idea of American life; another from a rural village, even if only a short distance away, would give an entirely different conception of the culture of our people as a whole. By keeping these, among many other points, constantly in mind, the archeologist may contribute much more in reconstructing prehistoric ethnology than otherwise would be the case, and his contributions become by no means unimportant in a study of the laws governing human development.

GEOLOGICAL SURVEY,
OTTAWA, ONT.

PHILIPPINE LITERATURE

BY FRANK R. BLAKE

THE native population of the Philippine Islands is made up of a number of different tribes, which fall naturally into three groups, *viz.*:

- a. The mountain pagan tribes, including the dwarf-like Negritos, doubtless the aboriginal inhabitants of the archipelago.
- b. The Mohammedan Moros of Sulu and Mindanao.
- c. The Christian tribes, the Indios or Filipinos of the Spaniards, who form the bulk of the population.

All these tribes, with the possible exception of the Negritos, speak languages which belong to the same linguistic family, the Malayo-Polynesian or Indonesian, embracing the languages spoken on almost all of the islands of the Pacific, on the Malay peninsula, and on the distant island of Madagascar. Every tribe, however, in each of these different groups, has its own language, distinct from those of its neighbors.

These languages have produced little or nothing which can claim to be literature in the sense of elegant and artistic writing. The literature of the Philippine languages is literature only in the broader sense of written speech, and it is in this sense that the term "Philippine Literature" is used in the present paper.

Few of the languages of the pagan tribes exist at all in written form. The Tagbánwas of Palawan, the long, narrow island stretching from Borneo towards Luzon, and their northern neighbors, the Mangyans of Mindoro, possess native alphabets, but these are probably not employed except for short inscriptions.¹ All other works in the languages of this group are printed in Roman type and are practically all of a religious character, being written by various

¹ Cf. A. B. Meyer; A. Schadenberg; and W. Foy, *Die Mangianschrift von Mindoro*, Berlin, 1895; F. Blumentritt, *Die Mangianschrift von Mindoro*, Braunschweig, 1896.

missionaries for the conversion and religious edification of different pagan tribes. Only five languages possess any written monuments, and none of these more than one or two specimens. Of special interest is the work of a member of the Tiruray tribe of Mindanao in Spanish and Tiruray, on the customs of his fellow-tribesmen.¹

The two principal languages of the Mohammedan tribes or Moros are Sulu, which is spoken mainly in the domains of the Sultan of Sulu on the chain of small islands extending from Mindanao to Borneo, and Magindanaw, the speech of the most powerful tribe on the large island of Mindanao.

The Moros² are unacquainted with the art of printing, their literary monuments being all in manuscript form, written in a slightly modified variety of the Arabic alphabet, similar to that used by the Malays of the Malay peninsula.

Their writings may be classified under four heads:

a. Historical annals, more or less legendary, consisting principally of genealogies of the *datos* or Moro chiefs.

b. Legal codes, based on various collections of Arabic law.

c. Religious texts, translations of the Kuran and its commentaries, of the Hadith or traditions regarding Mohammed, orations for the different Mohammedan festivals, etc.

d. Writings of varied character, stories, magic-texts, letters of the different *datos*, etc.

Almost all Moro manuscripts begin, just as most Arabic books do, with the Arabic phrase *bismi 'llâhi 'rrahmâni 'rrahîmi*, "in the name of God, the Compassionate, the Merciful." This is usually followed by a sentence or two in Malay. The Moros derive their learning from Arabic and Malay sources, and consequently take pride in airing their Arabic and Malay erudition.

Practically all Moro books are thus written by the Moros themselves. There is but one work, so far as I know, in a Moro language written by a foreigner, a printed catechism of Christian doctrine in Spanish and Magindanaw by a Jesuit missionary.

¹ J. Tenorio (a Sigayán), *Costumbres de los indios tirurayes*, Manila, 1892 (two columns, Spanish and Tiruray).

² Cf. N. M. Saleeby, *Studies in Moro History, Law, Religion, Ethnol. Survey* Pubs., Dept. of Interior, vol. IV, part I, Manila, 1905.

The Christian tribes constitute by far the most important element of the native population, both on account of their numbers and the comparatively high degree of civilization to which they have attained. The various tribes, while speaking distinct languages, have practically the same characteristics and customs, and really form one people.

At the time of the Spanish discovery and conquest, in the 16th century, the now Christianized Filipinos possessed native alphabets similar to those still used by the Tagbánwas of Palawan, and the Mangyans of Mindoro. There are notices of native Mss. in at least one Spanish writer,¹ but none of these have been preserved to our day, all existing works dating from the Spanish period. Moreover, even the ancient alphabets have been forgotten. All Philippine books with, so far as I know, but one exception, being printed in Roman type. This unique work, published in 1621, is an Ilokan catechism printed in Tagalog characters by the Austin friar Francisco Lopez.

The number of works published in the various languages of the Christian tribes down to 1903, according to the best bibliographies, 1898 and 1903 respectively,² is approximately as follows. Bisayan and Tagalog stand first with something under 300 works each. The next in rank, Ilokan, has less than half that number. Then follow, in a descending scale, Bikol with about 60, Pangasinan about 30, Pampanga 19, Ibanag 12, Kuyo 6, Zambal 3, Batan and Kalamian 1 each. In all there are about 800 works in the eleven languages here mentioned.

These books are of all sizes varying from small pamphlets of nine or ten pages to quarto volumes of six and seven hundred. The numbers here given, especially in the case of Tagalog and Bisayan, have probably been considerably augmented in the last few years.³

¹ Cf. *Report of Philippine Commission*, 1900, III, p. 403.

² W. E. Retana, *Catálogo abreviado de la biblioteca filipina*, Madrid, 1898; T. H. Pardo de Tavera, *Biblioteca Filipina*, Washington, 1903.

³ In Retana's latest bibliography, *Aparato bibliográfica de la historia general de Filipinas*, 3 vols., Madrid, 1906, the only works in the native languages listed from 1903 to 1905 (about 25) are in Tagalog.

The works written in these various languages are composed in both prose and verse, the verse being apparently of native origin.

Tagalog verse,¹ which may serve as an example, consists of lines containing the same number of syllables, and the ends of the lines in the same stanza must be in assonance with each other according to certain definite principles. The final syllables of all the lines of a stanza must have the same vowel, whether this vowel is final or is followed by a consonant. Of words ending in a consonant, there are two classes, those ending in *p, b, t, d, k, g, s*, and those ending in *l, m, n, ng, y, w*. Any word of one class may be used in assonance with any other word of that class, provided the vowel is the same, but words of the two classes can not be used together in the same stanza. For example *bondók* 'mountain,' ending in *k*, may be used in assonance with *lóob* 'heart,' ending in *b*, and *mahál* 'noble' ending in *l* with *biláng* 'number,' ending in the guttural nasal *ng*. It is to be noted that the words of the first class end in stop sounds or the spirant *s, i. e.*, in noised sounds, sounds accompanied by considerable friction of the escaping air, while the words of the second class all end in what are known as sonorous sounds, sounds made with little audible friction, and are characterized by greater resonance of the speech organs. Words with final vowel also fall into two classes, those with simple vowel, *e. g.*, *táwo* 'man,' and those with so-called guttural vowel, *i. e.*, a vowel followed by the glottal catch, *e. g.*, *walâ* 'not having.' Words of one of these classes can not be used in assonance with those of the other, nor can a word ending in either kind of vowel stand in assonance with a word having a final consonant. The difference between these two classes of vocalic endings is also apparently a difference in sonorousness, a simple vowel being more sonorous than one followed by the glottal catch. The principal Tagalog meters consist of seven, eight, twelve, or fourteen syllables to a verse, and three, four, five, or eight verses to a stanza.

The great majority of the works written in the languages of this group, at least five-sixths, are of a religious character, written

¹Cf. W. G. Seiple, *Tagalog Poetry*, JHU Circs., Vol. xxii, No. 163, June, 1903, pp. 78-79.

by the friars of the various orders for the instruction and edification of their flocks, for in the Philippine Islands under the Spanish regime, the friars had become the occupants of practically all the parishes in the archipelago to the exclusion of the native secular priests. This was one of the chief causes of the antagonism of the people towards the religious orders. Many of these religious works are simply translations from the Spanish. All the works in Kuyo, Zambal, Calamian, and Batan are religious, and in all the other languages except Tagalog books of a secular character are very rare; for example Bisayan and Ilokan which rank next to Tagalog in this respect have about a dozen each. These religious works consist of catechisms and manuals of Christian doctrine, books on deportment, lives of the saints, collections of sermons, novenas or series of nine days prayer to some saint, etc., the novenas being by far the most numerous.

The class of writings which stands next to the religious works in point of view of numbers, is the poetical romance or *corrido*, the latter term being a corruption of the Spanish *ocurrido*,¹ the passive participle of the verb *ocurrir* 'happen.' These are practically confined to Tagalog. They are remarkable tales of the adventures of royal or noble personages, usually in some remote or imaginary country, e. g., *Pinagdaánang búhay ni Don José Flores at nang princesa Virginia na anak nang háring Magaloaes sa Kahariang Turkia*, "The life of Don José Flores and the princess Virginia, daughter of king Magaloaes in the kingdom of Turkey"; or *Corrido at búhay na pinagdaánan nang príncipe Orontis at nang reinang Talestris sa kaharian nang Temisíta*, "The story and life of prince Orontis and queen Talestris in the kingdom of Temisita."

The *corrido* entitled *Pinagdaánang búhay in Florante at ni Laura sa Kahariang Albania*, "Life of Florante and Laura in the kingdom of Albania," written in 1870 by Francisco Baltazar, a native of the former province of Laguna near Manila, is considered the best poem in Tagalog. It opens in the following style:

¹ The Spanish word, however, never means romance or tale.

- 1) Sa isáng madilím gúbat na mapanġláo
dawág na matiníkay waláng pagítan
hálos naghihírap ang kay Febong sílang
dumálao sa lóob na lubháng masúkal
- 2) Malalakíng káhoy ang inihahandóg
páwang dalamháti, kahapísa't longkót
híni pa nang íbon ay nakalulúnos
sa lálóng matimpí't nagsasayáng lóob
- 3) Tanáng manġá báging na namimilípít
sa sanġá nang káhoy ay bálót nang tiník
may búlo ang búnġa't nagbibigáy sakít
sa kanġíno pa mang sumági't malápit.¹

"There was a dark and lonely wood, choked with thorny bejuco, into whose tangled interior the rays of the sun could scarcely pierce. Tall trees presaged trouble, sadness and melancholy; the song of the birds had a mournful sound even to the bravest and most joyous heart. All the vines which wound about the branches of the trees were encased in spines. Fruits hung rotting, threatening disease to whoever approached."

Dramatic productions, usually styled *comedias*, are found in Tagalog, Bisayan, and Ilokan. Their favorite theme is a contest for supremacy between some Christian and some Moro or Mohammedan state, in which the Christians are always victorious. This theme is a reflection of the long struggle which the Christian Filipinos had with their turbulent Moro (Mohammedan) neighbors on the south, the Sulus and Magindanaos. From the end of the 16th century, when the Spaniards first came in contact with the Moros, until the introduction of steam gun-boats about the middle of the last century, these bold pirates harried the coasts of the northern islands, just as in the Middle Ages the Northmen devastated the shores of Europe. For years neither property nor life was safe, and hundreds were carried away into slavery. It is but natural that these times of storm and stress should have left a lasting impression on the minds of the Filipinos, and that they should attempt to get even with their Mohammedan foes, if only on paper.

After the American conquest a number of plays were produced

¹ Notice the assonant syllables, *ao* (=aw), *an*, *ang*, *al*, in the first stanza; *og*, *ot*, *os*, *ob*, in the second; and *il*, *ik*, *it*, *il*, in the third.

which were directed against the rule of the United States, the so-called "Seditious Drama." One of the best known of this class of plays is *Hindî akó patáy*, "I am not dead."

The corrido and the drama are both without doubt borrowed forms of literature, but not so the lyric poetry. Here we have, if anywhere, the germs of a literature in the narrower sense. Much of this poetry exists only in the mouths of the people, though some, principally Tagalog, has been written down. Like the poetry of Oriental peoples in general it is often difficult to understand. These poems are mostly short and epigrammatic, consisting frequently of but one stanza of three or four lines. The following will serve as examples:

may laláki masigýá,
ginóo kun tumugpá,
aitá kun sumalóngã.

"There are some valiant men
Who are great lords when they embark,
But Negritos when they come to land
(i. e., they are brave until it comes
to real fighting)."

púsò ko'y lulutanglútang
sa gitná nang kadagátan
ang áking tinitimbólang
títig nang matâ mo lámang

"My heart sways up and down like a float
In the midst of the sea,
The goal of my restless course
Is the gaze of thine eye alone."

The Filipinos are very fond of proverbs and riddles which are usually cast into poetic form. Many of their proverbs are borrowed from Spanish, e. g.,

kahíma't paramtán ang hayop na makhín,
magpakailán ma'y makhín kun tawágín.
"Though the monkey be clothed,
he will always be called a monkey."

This is the Spanish: *Aunque la mona se vista de seda mona se queda*. Many of the proverbs, however, are doubtless of native origin.

Examples of native riddles are:

Munting dagatdagátan,
Binabákod nang dangláy.
A little lake fringed with reeds [*i. e.*, the eye].
Nang umága'y tikum pa
Nang mahápo'y nabuká.
At dawn its mouth is closed,
In the evening it is open [*i. e.*, a flower].

Newspapers and periodicals have been published in the three principal languages, Tagalog, Bisayan, and Ilokan. These are usually in two languages, a native dialect, and Spanish. Sometimes they are printed in parallel columns, native dialect and Spanish translation.

Portions of the New Testament, the Gospels and Acts of the Apostles, have been translated into the principal languages, under the auspices of the British and Foreign Bible Society. In all probability a translation of the whole Bible is contemplated.

Books belonging to departments of literature other than the preceding are comparatively rare and are found principally in Tagalog. There are grammars of Spanish in Tagalog, Bisayan, Ilokan, and Ibanag. Medical works, usually of a practical character, and a few legal treatises, are found in Tagalog and Bisayan.

Deserving of mention among the remaining works is a treatise in Tagalog on the Filipino national sport, the fighting of game-cocks, and the story *si tandáng Basio Makunat* "The Cock Basio Macunat," written by a Franciscan friar in 1885 in order to instil into the minds of the Filipinos the idea that it was best for them not to learn Spanish or attempt to become civilized, that the more ignorant a Filipino was, the happier he would be.

More than one third of all the works treated are anonymous, and the authors of the rest are men of comparatively little note. While many of these authors are Spaniards, a number are true native Filipinos. Francisco Baltazar, the author of "Florante and Laura," the best Tagalog poem, has already been mentioned. So far as I know this is his only production. The most prolific of the writers is one Mariano Perfecto, who composed about fifty different works

in Bisayan on religious subjects. Next to him ranks Joaquin Tuason, with twenty works in Tagalog, also of a religious character.

This brief sketch will serve to give some idea of the extent and character of works in the various Philippine languages. Whether these languages or any one of them will ever develop a real literature, is a question which only the future can answer.

Some persons, struck by the great resemblance which the various Philippine languages bear to one another, have thought it would be possible to fuse these languages into one, and form a sort of national compound language, but such an artificial scheme is certainly impracticable. If the Filipinos are destined ever to have a national language in which a national literature can be written, that language will almost surely be Tagalog, the language of the capital city, and of the most progressive race of the archipelago; a language admirably suited by its richness of form and its great flexibility for literary development, and needing but the master hand of some great native writer to make it realize its latent possibilities.

WINDSOR HILLS,
BALTIMORE, MD.

ON THE PUELCHÉAN AND TSONÉKAN (TEHUELCHÉAN),
THE ATACAMEÑAN (ATACAMAN) AND CHO-
NOAN, AND THE CHARRUAN LINGUISTIC
STOCKS OF SOUTH AMERICA

BY ALEXANDER F. CHAMBERLAIN

I. PUELCHÉAN AND TSONÉKAN

THE linguistic relationships of the numerous Indian tribes now or in times past inhabiting what constitutes at present the territory of the Argentine Republic have been the subject of much discussion, and widely divergent opinions have been expressed, even by good authorities, on some of the points involved. The very existence, indeed, of the Puelchean and Tsonekan or Tehuelchean as distinct families of speech has been denied and these languages attached to the Araucanian, etc. But the evidence in hand justifies the recognition of the *Puelchean* and *Tsonekan* as independent linguistic stocks, and they are so listed here.

Puelchean

The territory of the Puelchean stock lies in central and eastern Argentina, from the foot-hills of the Andes to the Atlantic Ocean—now particularly in the region between the Rio Colorado and the Rio Negro. Outes and Bruch (p. 105) define their area as follows: "At the time of the conquest, the Puelches occupied the Province of Buenos Aires (except the country of the Querandíes), the Government of the Pampa, the south of Mendoza, San Luis and part of Córdoba, and the region of the Government of Rio Negro lying between that river and the Rio Colorado. They were divided into three groups: Taluhets, Diuihets, and Checchets." Concerning the affinities of the Indians known as "Puelches" much difference of opinion has prevailed. D'Orbigny sought to identify them with the ancient Querandíes, etc. Ludewig (*Lit. Amer. Abor. Lang.*, 1858, p. 155) notes their supposed relationship to "the wild Charruas." In 1891 Brinton (*Amer. Race*, p. 326) included them as a

branch of his Aucanian (*i. e.*, Araucanian) stock, but later (1892) seems to have believed in Tsonekan (Tehuelchean) affinities. Deniker (*Races of Man*, 1900, p. 74) regards the Puelches as a "new tribe, sprung from the Patagonians and the Araucans, with a strain of Guaycuru blood." Ehrenreich (1905) gives the Puelches an independent status. Schuller (1906) classifies the Puelches, Tehuelches, etc., all under the head of "Pampas," but incorrectly. The term "Pampas Indians," or simply "Pampas," is often synonymous with the whole or a part of the Puelchean stock, especially the ancient or extinct sections of it. The Diuihet and the Chechehet are termed "Pampas" by the Spanish writers. The burden of evidence in favor of the independent status of this stock has not changed essentially since Hale (in 1840), and, before him, d'Orbigny, distinguished the Puelches from the Tehuelches; and the Salesian missionary D. Milanésio has again (1898) proved the utterly unrelated character of the Araucanian, the "Pampan," and the Tsonekan (Tehuelchean) languages. Outes and Bruch (1910, p. 105), however, still express the opinion that "the language of the Puelches, as yet not studied, seems to be a co-dialect of Patagonian or Tehuelche, but with considerable difference in vocabulary."

The most important literature concerning the Puelchean linguistic stock will be found in the following titles:

1. BARBARA, F. Usos y costumbres de los Indios Pampas y algunos apuntes históricos sobre la guerra de la frontera. Buenos Aires, 1856. Pp. 98.
2. —. Manual ó Vocabulario de la lengua Pampa y del estilo familiar. Buenos Aires, 1879. Pp. 178.
3. BRINTON, D. G. Studies in South American Native Languages. Phila., 1892. Pp. 67. Also in *Proc. Amer. Philos. Soc.*, vol. xxx, 1892, pp. 45-105.
4. HALE, H. United States Exploring Expedition. During the Years 1838, 1839, 1840, 1841, under command of Charles Wilkes. Vol. vi, Ethnography and Philology. Phila., 1846. Pp. xii, 666.
5. LAFONE-QUEVEDO, S. A. La raza pampeana y la raza guaraní, ó los indios del Rio de la Plata en el siglo XVI. *Congr. Científ. Lat.-Amer.* (Buenos Aires, 1900), vol. v, pp. 21 ff.
6. MILANESIO, D. La Patagonia. Lingua, industria, costumi e religione. Buenos Aires, 1898. Pp. 56.
7. D'ORBIGNY, A. L'Homme Américain (*Voy. d. l'Amér. Mérid.*, T. iv), Paris, 1839.
8. OUTES, F. F. Los Querandíes. Contribución al Estudio de la Etnografía Argentina. Buenos Aires, 1897. Pp. xii, 204.

9. OUTES, F. F. Etnografía Argentina. Segunda Contribución al Estudio de los Indios Querandíes. Buenos Aires, 1898.
10. — y BRUCH, C. Los Aborígenes de la República Argentina. Buenos Aires, 1910. Pp. 149. See pp. 105-106.
11. DE ROZAS, J. M. Gramática y Diccionario de la lengua Pampa. Ms. begun ca. 1868.

The Puelchean words cited by Brinton (pp. 49-50) are from d'Orbigny and Hale. The vocabulary given by d'Orbigny (p. 80) consists of 23 words. Hale has a Puelche vocabulary and sentences (pp. 653-656) in comparison with Tehuelche,—“Pampas and Tehuiliche.” Pages 92-98 of Barbara's *Usos y Costumbres* treat of “the Indian language,” and some dialogues in Puelche and Spanish are given. In his *Manual*, Barbara gives rather extensive material. Father Milanese, who had been for fifteen years a missionary in southern Patagonia and Tierra del Fuego, discusses the three languages, Araucanian, Tehuelche, and Pampa proper, all of which he recognizes as distinct from one another (the Puelche he terms “Pampa-Tehuelche” or “Pampa proper”). A comparative vocabulary of all three is given. At the Seventeenth International Congress of Americanists, held at Buenos Aires, May 16-21, 1911, Sr Adolfo Saldias of Buenos Aires, described briefly a manuscript grammar and dictionary of “the Pampa language,” which had come into his possession with other Mss. from the family of Gen. Rozas. The general, whose acquaintance with these Indians was of long standing, began this grammar and dictionary about 1868. The stock-name *Puelchean* is derived from *Puelche*, the name given to these Indians by their Araucanian neighbors, in whose language the term signifies “eastern people.”

Tsonekan (Tehuelchean)

The territory of the *Tsonekan* or *Tehuelchean* linguistic stock embraces the whole of Patagonia from the Rio Negro to the Straits of Magellan, over which these Indians have wandered for centuries. Formerly very numerous, they count now probably less than 2,000 souls.

The principal literature concerning the *Tsonekan* linguistic stock is contained in the following titles:

1. BRINTON, D. G. The American Race. N. Y., 1891. Pp. xvi, 392.

2. BRINTON, D. G. The Hongote Language and the Patagonian Dialects. In his *Studies in South American Native Languages* (Phila., 1892), pp. 45-52.
3. COX, G. E. Viaje en las regiones septentrionales de la Patagonía, 1862-1863. Santiago de Chile, 1863. Pp. viii, 273.
4. *Descripción de Puerto Deseado en la costa Patagónica con el vocabulario de los Patagones, 2 Diciembre, 1789*. Ms. in British Museum, forming pp. 42-49 of Add. 17, 631. Title given by de la Viñaza (*Bibl. Esp. d. Lenguas Indíg.*, 1892, p. 179).
5. *Diccionario de la lengua Patagónica*. Ms. (of end of 18th cent.), forming pp. 36-39, of Add. 17, 631, British Museum. Title given by de la Viñaza (p. 280).
6. FITZ-ROY, R. Narrative of the Surveying Voyages of his Majesty's Ships *Adventure* and *Beagle* between the Years 1826 and 1836, etc. Lond., 1839. 3 vols., Append. and Addend.
7. DE LA GRASSERIE, R. De la langue Tehuelche. *Internat. Amerik.-Kongr.*, XIV. (Stuttgart, 1904), 1906, pp. 611-647.
8. HALE, H. Op. cit.
9. LEHMANN-NITSCHKE, R. Verzeichnis der Wörterbücher der patagonischen Sprache. Append. B. of *Zur Vorgeschichte der Entdeckung vom Gryp-totherium bei Ultima Esperanza* in *Naturw. Wchnschr.*, xv, 1900, pp. 385-392, 409-414, 426-428 (*Naturwiss. Abhand.*, Heft 29, Berlin, 1901, pp. 4-47).
10. —. Two Linguistic Treatises on the Patagonian or Tehuelche Language by Theophilus Schmid, Catechist of the Patagonian Missionary Society. Edited, with an Introduction, by Robert Lehmann-Nitsche. Buenos Aires, 1910. Pp. 58, 41.
11. LISTA, R. Viaje al país de los Tehuelches. Exploraciones de la Patagonía austral. Primera parte. Buenos Aires, 1879. Pp. 82.
12. —. Mis exploraciones y descubrimientos en Patagonía, 1877-1878. Buenos Aires, 1880.
13. —. Una raza que desaparece. Los indios Tehuelches. Estudio etnológico sobre los Tehuelches, según observaciones propias. Buenos Aires, 1894. Pp. 125.
14. —. Lenguas argentinas. Los Tehuelches de la Patagonía. *Anales de la Soc. Científ. Argent.* (Buenos Aires), 1896.
15. VON MARTIUS, C. F. P. Beiträge zur Ethnographie und Sprachenkunde Amerikas zumal Brasiliens. Bd. II. Sprachenkunde. Wörtersammlung Brasilianischer Sprachen. Leipzig, 1867. Pp. xxi, 548.
16. MILANESIO, D. Op. cit.
17. MITRE, B. Catálogo razonado de la Sección Lenguas Americanas. Con una Introducción de Luis Maria Torres. Tomo I. Buenos Aires, 1909. Pp. xliii, 411.
18. MORENO, F. P. Recuerdos de viaje en Patagonía. Montevideo, 1882. Pp. 46.

19. MORENO, F. P. Viaje a la Patagonía austral. Vol. I. Buenos Aires, 1879. Pp. viii, 460, iv.
20. MÜLLER, F. Die Sprache der südlichen Tehuel-het (Tsoneka). *Grundr. d. Sprachwiss.*, II Bd., I Abt. Wien, 1882. Pp. 424-428.
21. MUSTERS, G. C. At Home with the Patagonians. A Year's Wanderings over Untrodden Ground from the Straits of Magellan to the Rio Negro. Lond., 1871. Pp. 320. Sec. Ed. (Lond., 1873). Pp. xix, 340.
22. D'ORBIGNY, A. Op. cit.
23. ——. Vocabulaire de la langue des Tehuelches. Ms. in the Bibliothèque Nationale, Paris. It has been published by de la Grasserie, R. (q.v.).
24. OUTES, F. F. y BRUCH, C. Los Aborígenes de la República Argentina. Buenos Aires, 1910. Pp. 149. See pp. 11-129.
25. PIGAFETTA, A. Premier voyage autour du monde, sur l'escadre de Magellan, pendant les années 1519, 20, 21 et 22. Paris, l'an IX (1800). Pp. lxiv, 416.
26. PLATZMANN, J. Der Sprachstoff der patagonischen Grammatik des Theophilus Schmid. Mit einer Karte des südlichen Amerika. Leipzig, 1903. Pp. 130. See Lehmann-Nitsche, R.
27. *Raccolta di documenti e studi pel quarto centenario dalla scoperta dall' America*. Parte v, vol. III. Roma, 1894.
28. SCHMID, T. Vocabulary and Rudiments of Grammar of the Tsoneka Language. Bristol (Eng.), 1860. Pp. iv, 47.
29. ——. Tehuelche Grammar. Ms. (English), pp. 40. Also Spanish translation (pp. 4). Both printed in Mitre (q.v.).
30. ——. See Lehmann-Nitsche, R.; Platzmann J.
31. VIEDMA, A. Diario de viaje a la costa patagónica. In *de Angelis, P.*: Colección de obras y documentos relativos a la historia antigua y moderna de la Provincia del Rio de la Plata., 6 vols. Buenos Aires, 1835-1837. Also new ed., 1900-1905. See vol. VI.

The first linguistic record of the Tsonekan or Tehuelchean stock is the vocabulary taken down by Pigafetta in 1520, in connection with the Magellan expedition round the world, but not actually printed till 1800, and then rather incorrectly. In 1894, however, as part of the celebration of the quatercentenary of the discovery of America by Columbus, a good reprint, based upon the Ms. in the Ambrosian Library, was published at Rome. It was long practically the only Tsonekan data accessible. Viedma, governor of the Patagonians, collected, in 1780, at San Julian Bay (the place of origin of Pigafetta's list), a vocabulary of 285 "Patagonian words." In 1829 d'Orbigny obtained a vocabulary of 23 words from "the Patagonians or Tehuelches" on the Rio Negro; and, on comparing these with the words of Pigafetta, recognized (p. 215) the identity

of the Tehuelche and the Patagonians. More recently R. Lista, with a vocabulary of 145 words, obtained by him, made a similar comparison of the lists of Pigafetta, Viedma, d'Orbigny, and Musters, thus clinching the identification of d'Orbigny. Musters' vocabulary of 222 words and 17 phrases was collected from the northern Tehuelches. Lista's *Viaje* contains a brief vocabulary (some 60 words) from the region of the Rio Shehuen, near Santa Cruz; his *Una raza que desaparece* "a vocabulary and phraseology (some 215 words and 60 phrases) of the Tsoneca or Tehuelche language"; his *Lenguas Argentinas*, a comparative study of the various vocabularies of the Puelche and Tehuelche tongues; his *Mis Exploraciones*, a vocabulary of some 140 words. Moreno's *Viaje* contains a "Vocabulario Castellano Tehuelche, Ahoneckenke ò Tzoneca" of 624 words, obtained from the Indians about Argentina Lake, near Santa Cruz. In his *Recuerdos* he gives a vocabulary of the Gennaken, a language thought by him to be "the ancient Pampean," and distinct from Tehuelchean (Tsonekan) and Araucanian,—some 40 Gennaken words are reprinted by Mitre (pp. 214 et seq.). Cox gives a comparative vocabulary of northern Tehuelche and Araucanian—some writers, with de la Grasserie (p. 612), say that the "northern Tehuelches" are Puelchean, not Tsonekan, but no Puelchean tribes really belong south of the Rio Negro. The "Patagonian" vocabulary in von Martius was obtained from D. Fel. Bauza, a Spaniard. Brinton's Tsonekan material (*Amer. Race*, p. 364) is from von Martius, d'Orbigny, Musters, and Lista; that in the paper of 1892 is from d'Orbigny, Hale, von Martius, Musters, Lista, Pigafetta, and the British Museum Mss., all brief vocabularies. Hale's Tsonekan material consists of a vocabulary of some length, and that in Fitz-Roy numbers 53 words only. Müller's grammatical sketch was based upon the notes of Schmid. De la Grasserie prints the vocabulary (pp. 613-625) of the d'Orbigny Ms., which is quite extensive. He also publishes the vocabularies of Lista, von Martius, Musters, Melanesio and those given by Brinton; likewise the grammatical sketch of F. Müller. This makes his article valuable for those not having access to some of the original works cited. Mitre, in his *Catálogo*, résumés, in the section on Tehuelche, the Ms. grammar of Schmid (pp. 199-211), obtained through the

missionary Bridges, and gives (pp. 218-258) a Spanish version of this grammar, which he also prints at length in English (pp. 259-298) with a Tehuelche-Spanish and Spanish-Tehuelche vocabulary made up from Schmid's grammar. This he states (p. 199) to be "the only grammar of the Tehuelche language in existence." The *Vocabulary and Rudiments of Grammar of the Tsoneca Language* (1860), mentioned by Musters, is referred to by Lehmann-Nitsche in these terms (p. 13): "After the most diligent search I am obliged to confess that I have not been able to discover a single copy of this publication." Two Ms. copies, however, are known to exist: Dr J. Platzmann's facsimile reproduction, and another, formerly in the collection of F. Müller, but now belonging to Dr K. von den Steinen. From his copy Dr Platzmann produced the rearranged *Sprachstoff* (1903), of which Dr Lehmann-Nitsche says (p. 14): "In this arrangement Platzmann was anything but successful; in place of Schmid's able summary the subject matter is split up into two parts, one in Patagon-German-Latin, and the other in German-Spanish-English-Patagon, both in alphabetical order, without any reference to the original which had been so altered in its form." Platzmann's facsimile of Schmid's Vocabulary, etc., is now in the library of Dr Lehmann-Nitsche. The "Two Linguistic Treatises" of Schmid, published in 1910 by Dr Lehmann-Nitsche, are the *Vocabulary and Rudiments of Grammar of the Tsoneca Language*" (pp. 17-58) and (pp. 1-41) the *Grammar of the Tsoneca Language*, from the Mitre Ms. One of the teachers of Schmid in Patagonian, as Dr Lehmann-Nitsche notes (p. 7), was the Indian Casimiro, mentioned by Capt. Musters. With this publication of Dr Lehmann-Nitsche, the valuable data of Schmid, relating to the language of the southern Tehuelches, becomes accessible to scholars. The Tsonekan language is of some interest to students of Shakespeare, since Caliban's "dam's god, Setebos," in *The Tempest*, is a Patagonian deity, the name having evidently been taken from Pigafetta. The stock-name *Tsonekan* is derived from *Tsoneka* (*Tsoneca*), or *Tsonek*, *Chonek*, etc., the term by which they call themselves, said to signify "men." "people." The name *Tehuelche* (see *Puelche*) is of Araucanian origin and signifies "southerners."

II. ATACAMEÑAN AND CHONOAN

The *Atacameñan* and *Chonoan* languages are now, in all probability, completely extinct, although descendants of the Indians, who once spoke them, continue to exist in small numbers in certain parts of the areas concerned. The linguistic relationships of the tribes inhabiting the littoral of the Pacific, in this region, have been by no means clearly established, and other stocks than those generally recognized may also have flourished there.

Atacameñan (or Atacaman)

The territory of the Atacameñan or Atacaman linguistic stock included the region around Atacama, from about 19° to 24° s. lat., the southwestern portion of this area, however, being occupied by another independent stock, the Changoan. This part of South America, especially the eastern and southern sections, is archeologically and ethnologically important as the ancient seat of the so-called "Atacameñan (Atacaman) culture," recently investigated by Count de Créqui-Montfort and others. Boman (p. 58) attributes to the ancient Atacama remains in the Puna de Jujuy, Santa Catalina, Rinconada, Cochinoa, and Casabindo, going so far as to recognize "one people inhabiting the great zone between the Argentina Puna and the Pacific Ocean." The modern representatives of the old Atacama seem to be the Indians (not, however, "miserable fishermen," as Brinton says) calling themselves *Likan-antai* ("the people") and their language *Cunza* ("our"), surviving to the number of two or three hundred at San Pedro de Atacama, Toconao, Sóncor, Cámar, Socaire, Peine, etc. Of these, according to Vaïsse (p. 10), only about 25 could speak their mother-tongue in 1895; and in 1911 Echeverría y Reyes reports the language as entirely extinct. The Atacama of Chiu-chiu seem to have altogether disappeared. The Atacameñan tongue was, as von Tschudi reports, spoken in the second half of the nineteenth century at Calama (formerly called Atacama Baja), Chiu-chiu, and Antofagasta. Moore, by means of place-names, sought to trace the Atacameñan tongue from Cobija on the coast to Purilari in the interior. The name *Likan-antai*, "people of the village," refers to San Pedro de Atacama, the village *par excellence*. In the Puna de Jujuy, according to Boman (p. 64),

real Atacameñan names are rare. The number of Atacameños was estimated by d'Orbigny (p. 151) at 7,348, of whom 5,406 were in the province of Tarapaca, and 1,942 in Atacama. Bertrand in 1884 gives the Indian population of the Atacama Desert and the Puna de Atacama as about 4,000, of whom perhaps half were Atacameños and the remainder Changos and Bolivian Indians. The Atacameños of Tarapaca have been absorbed by the Aymará.

The purest Atacameños are to be found in San Pedro de Atacama. The most important literature concerning the Atacameñan (Atacaman) linguistic stock will be found in the following titles:

1. BOMAN, E. *Antiquités de la Région Andine de la République Argentine et du Désert d'Atacama*. Tome I. Paris, 1908. Pp. xi, 388. See pp. 38-67.
2. BRESSON, A. *La Tierra y sus Habitantes*. Vol. I. Barcelona, 1878.
3. BRINTON, D. G. *The American Race*. N. Y., 1891. Pp. xvi, 392.
4. DE CRÉQUI-MONTFORT, G. *Fouilles dans la nécropole pré-hispanique de Calama*. *Les anciens Atacamas*. *Intern. Amerik.-Kongr.*, XIV (Stuttgart, 1904), 1906, pp. 351-364.
5. DARAPSKY, L. *Estudios lingüísticos americanos*. *Bol. Inst. Geogr. Argent.* (Buenos Aires), vol. XII, 1889, pp. 368-380.
6. ECHEVERRÍA Y REYES, A. *Noticias sobre la lengua Atacameña*. Santiago de Chile, 1890. Pp. 28.
7. ——. *Noticias sobre la extinguida lengua Cunza*. Brief abstract of a paper read at the Seventeenth Intern. Congr. of Americanists, Buenos Aires, 1910. In Lehmann-Nitsche: *Sumarios de las Conferencias y Memorias*, etc. Buenos Aires, 1910.
8. MAGLIO, B. *La Lengua de los naturales de Atacama*. Santiago, 1890. Pp. 20.
9. MOORE, T. H. *Vocabulaire de la langue Atacameña*. *Congr. Intern. d. Amér.*, 2e Sess. (Luxemb., 1877), 1878, vol. II, pp. 44 ff.
10. PHILIPPI, R. A. *Reise durch die Wüste Atacama*. Halle, 1860.
11. SAN ROMAN, F. J. *La lengua de los naturales de Atacama*. Santiago, 1890. Pp. 20.
12. VON TSCHUDI, J. J. *Reisen durch Süd-America*. 5 Bde. Leipzig, 1866-1869.
13. VAÏSSE, E. F., HOYOS, F., y ECHEVERRÍA Y REYES, A. *Glosario de la Lengua Atacameña*. Santiago, 1896. Pp. 36.

Bresson (vol. I, p. 887) gives a vocabulary of 23 words obtained during his visit to Bolivia in 1870. Philippi's list (p. 56) is of 60 words. The vocabulary in San Roman contains 148 new words,—the author had the assistance of Father B. Maglio, formerly priest at San Pedro de Atacama. Some grammatical data and a vo-

cabulary of 140 words are given in Moore. Von Tschudi (vol. v, 1869, p. 77) has a vocabulary of 41 words. Echeverría y Reyes' monograph of 1890 contains an Atacameñan vocabulary of 239 words. Brinton's vocabulary (p. 348) of 21 words is from Philippi, von Tschudi, Moore, and San Roman. Darapsky seeks to ally the Atacameñan with Aymaran, but with no success. The *Glossary* of Vaïsse, Hoyos, and Echeverría y Reyes, lists, including numerous geographical names, some 1100 Atacameñan words being the most extensive record of the linguistic material of the stock in existence.

The stock-name *Atacameñan* is derived from *Atacameño*, the Spanish designation of an Indian of this tribe (*Atacameña*, the language), signifying "belonging to, native of, *Atacama*." The etymology of the place-name *Atacama* (town, desert, province, etc.) is uncertain. In Vaïsse (pp. 13-14) the origin is discussed at length, without any of the suggested etymologies from Quechuan or Atacameñan being approved or adopted.

Chonoan

The territory of the Chonoan linguistic stock included the Archipelago of Chonos and the adjacent regions of the Chilean coast, from about 44° to 25° s. lat. The original inhabitants of the Chonos Islands have been thought to be extinct, but Dr C. Martin, as Brinton notes (*Amer. Race*, p. 327), states that the Huaihuenes Indians of the Chonos Islands "were transported in 1765 to the island of Chaulanec, where their posterity still survive." But all linguistic data from Chiloe are Araucanian. Other attempts to colonize the Chonos seem to have been made also by the missionaries, as *e. g.*, on the island of Huar, and on the large island of Chiloe. D'Orbigny classed the Chonoan language as Araucanian, as did likewise Poeppig. Brinton (*Amer. Race*, p. 327) made the Chonos members of his Aucanian (*i. e.*, Araucanian) stock, but observes also that "the language of the Chonos is said to be quite different from that of the Araucanians." Dr Rodolfo Lenz (*Dicc. etimol.*, p. 312) is of opinion that the Chonos were different in language from the Mapuche or Araucanians, and may have resembled the southern Tehuelche and Onas.

The not very extensive literature concerning the Chonoan linguistic stock includes the following titles:

1. BRINTON, D. G. *The American Race*. N. Y., 1891. Pp. xvi, 392.
2. ESTEVAN, M. *Vocabulario de la Lengua Chona* (ca. 1612). Ms. cited by Lozano in his *Historia*. Father Estevan is also said to have composed sermons in the Chonoan tongue. See Mitre, *Catálogo*, p. 157.
3. FALKNER, T. *A Description of Patagonia, etc.* Herefort, 1774. Pp. 144.
4. FITZ-ROY, R. *Narrative of the Surveying Voyages of his Majesty's Ships Adventure and Beagle between the Years 1826 and 1836, etc.* 3 vols. Add. and App. Lond., 1839.
5. HYADES, P. et DENIKER, J. *Mission Scientifique du Cap Horn, 1882-1883. Tome VII. Anthropologie, Ethnographie.* Paris, 1891. Pp. vii, 423.
6. MARTIN, C. *Ueber die Eingeborenen von Chiloe.* *Ztschr. f. Ethnol.*, vol. IX, 1877, pp. 161-181, 317-330.
7. MITRE, B. *Catálogo razonado de la Sección Lenguas Americanas. Tomo I.* Buenos Aires, 1908. Pp. xliii, 411. See p. 157.
8. POEPPIG, E. *Reise in Chili und Peru.* 2 Bde. Leipzig, 1836.

In the vocabularies of the Fitz-Roy expedition are included three words of the language of the Chonos Indians, which seem to be all the published material extant. The testimony of Lozano, Estevan, Rosales, J. G. Marti, etc., cited by Mitre (p. 167) counts for the independent character of the Chonoan language.

The stock-name *Chonoan* is derived from *Chonos*, the appellation by which the Indians after whom the islands inhabited by them were called the Archipelago de los *Chonos*, were known to the early missionaries, etc., of Chile. According to Lenz (*Dicc. etimol.*, p. 312), *Chono* is probably the name given by these Indians to themselves. Its etymology is quite uncertain.

III. CHARRUAN

In its greatest extent, the territory occupied by the *Charruan* stock embraced the region from the Paraná to the sea-coast, between the mouth of the La Plata and the Laguna dos Patos, including thus all of modern Uruguay and somewhat beyond. But there has been great difference of opinion as to the status of the Charrúas and the character of their language. Brinton, in 1891, classed them as an independent stock, but later (1898) suggested Tupi relationship, while Lafone-Quevedo (1897) and Schuller (1906) list the Charrúas as Guaycuruan. Ameghino, as far back as 1881, considered them Guaraní (or Tupian). Ludewig (*Lit. Abor. Amer. Lang.*, 1848, p. 155) reports that "the wild Charrúas" were related

to the Puelches; and some have sought to connect them with the Araucanian stock. Outes and Bruch (1910, p. 90) cite the opinion of d'Orbigny that the Charruan language was related to Puelchean, an idea based upon the fact of "its harsh and guttural character." Finck (*Die Sprachst. d. Erdkr.*, 1909, p. 101), admits the Charruan (his *tsarruaisch*) as independent, and, on the whole, we may consider Brinton's first opinion justified and rank Charruan as an independent linguistic stock.

Brinton (*Amer. Race*, 1891, p. 317) listed the following tribes as belonging to the Charruan stock:

Bohanes. On the Paraguay near the Rio Negro.

Chanes. Adjacent to the Bohanes.

Charruas. On the coast east of the Rio Uruguay.

Guenoas. East of the Uruguay.

Martidanes. East of the Uruguay.

Minuanes. Between the Uruguay and Paraná.

Yaros. On the east bank of the Uruguay.

This classification follows largely Hervas. The real Charrúas of Uruguay, like those of Corrientes and the Minuanes of Entre Ríos in Argentina, the Bohanes, Yaros, etc., are now all extinct, according to Araújo and other authorities, although Deniker (*Races of Man*, 1900, p. 572) states that the hybrid descendants of the Chanásés, Querandíes, etc., known as the Talhuet, "were still fairly numerous in 1860 between Buenos Aires and Rio Negro," and in this remnant the old Charrúas may have had some share. In the terrible wars of extermination waged against the aborigines of Uruguay in 1830-1832 few of the Charrúas escaped capture or death. The "last of the Charrúas" (two men and two women) were exhibited in Paris in 1830 as "wild men," dying there some time afterwards. Uruguay has become what Araújo calls "an American country without Indians." Considerable of the former aboriginal element has, however, been absorbed into the white population.

The principal literature concerning the Charrúas will be found in the following titles:

1. ARAÚJO, O. El ultima Charrúa. Article in *El Iris* (San Eugenio del Cuarcim) Año I, 2a epoca, num. 6, domingo de diciembre de 1905.

2. ARÁUJO, O. Significado de la voz "Uruguay." *Anales de Instrucción Primaria* (Montevideo), vol. v, 1908, pp. 762-767.
3. —. Un país americano que no tiene Indios. *Ibid.*, vol. vi, 1909, pp. 114-119.
4. —. *Diccionario geográfico del Uruguay*. Montevideo, 1900. Pp. 1006.
5. *Arrivée de quatre sauvages Charrua*, etc. Paris, 1830.
6. BAUZA, F. *Habitantes primitivos del Uruguay*. Montevideo, 1895.
7. BRINTON, D. G. *The American Race*. N. Y., 1891, Pp. xvi, 392.
8. —. *The Linguistic Cartography of the Chaco Region*. Philadelphia, 1898. Pp. 30.
9. CAMAÑO, —. *Catecismo brevisimo en la lengua Cuënoa*. Mentioned by Hervas (q.v.).
10. FIGUEIRA, J. H. Los primitivos habitantes del Uruguay, at pp. 131-147 and 154-156 of *El Uruguay en la exposición histórico-americana de Madrid*. Montevideo, 1892. Also pamphlet with same title (Montevideo, 1894. Pp. 44).
11. GRANADA, D. *Vocabulario Rioplatense Razonado*. Seg. ed. Montevideo, 1890, pp. 411.
12. GRANADA, D. *El idioma nacional*. Montevideo, 1900.
13. HERVAS, L. *Catálogo de las lenguas conocidas*, etc. Vol. i. Madrid, 1800.
14. —. *Saggio pratico*, etc. Cesena, 1787.
15. KERSTEN, L. Die Indianerstämme des Gran Chaco bis zum Ausgange des 18. Jahrhunderts. *Internat. Arch. f. Ethnogr.* (Leiden), vol. xvii, pp. 1-80.
16. LAFONE-QUEVEDO, S. Los Indios Chanás y su Lengua, con Apuntes sobre los Querandíes, Timbúes, Yarós, Boanes, Guënoas ó Minuanes, y un mapa étnico. *Bol. d. Inst. Geogr. Argent.* (Buenos Aires), vol. xviii, 1897, pp. 115-154.
17. —. "La Raza Americana de Brinton." *Estudio critico*. *Ibid.*, vol. xiv, 1894, pp. 500-528.
18. —. *Progresos de la Etnología en el Rio de la Plata durante el año de 1899*. *Ibid.*, vol. xx, 1899, pp. 1-64.
19. LOZANO, P. *Historia de la Conquista del Paraguay, Rio de la Plata y Tucuman*. 4 vols. Buenos Aires, 1874-1875.
20. MARTINEZ, B. T. *Etnografía del Rio de la Plata*. *Bol. d. Inst. Geogr. Argent.*, vol. xxii, 1901, pp. 89-121.
21. OUTES, F. F. Los Querandíes. *Contribución al Estudio de la Etnografía Argentina*. Buenos Aires, 1897. Pp. xii, 204.
22. — y BRUCH, C. Los Aborígenes de la República Argentina. Buenos Aires, 1910. Pp. 149. See pp. 90-92.
23. DE SAN MARTIN, J. Z. *Tabaré: Indice alfabetico de algunas voces indígenas*. Montevideo, 1888.
24. SCHULLER, R. R. *Geografía Física y Esférica de las Provincias del Paraguay y Misiones Guaraníes*. Compuesta por don Felix de Azara . . . en la

Asunción del Paraguay. Año de MDCCXC . . . Bibliografía, Prólogo y Anotaciones por Rodolfo R. Schuller. An. d. Mus., Nac. de Monte Video, Secc. Histor.-filos., vol. I (1904), pp. i-cxxxii, 1-478. See on Charruas, etc., pp. lxxxii-cxv.

25. —. Sobre el Orijen de los Charrúa. Santiago de Chile, 1906. Pp. 158.

26. THOUAR, A. Explorations dans l'Amérique du Sud. Paris, 1891.

⁶ The published material in the languages of the Charruan stock is insignificant. The words in Hervas' *Catálogo* (p. 46) and *Saggio* (pp. 288, 289) belong to the Guënoa dialect. He received from Sr Camaño a brief catechism in Guënoa, the examination of which led him to state (p. 197) that "the language shows no affinity with the Paraguayan tongues of which we have grammars and vocabularies." Martinez, on the basis of a very few words, seeks to establish a relationship between the Charrúa and the Tehuelche (also Pehuelche). Outes and Bruch (p. 90) say that "the Charrúa language is absolutely unknown."

The stock-name *Charruan* is derived from *Charrúa*, the appellation of the most important member of the family. The etymology of this term is much disputed. According to Brinton (*Ling. Cart.*, p. 23), *Charrúa* is a Guaraní expression signifying "my men (*che, uara*)."⁷ Lafone-Quevedo interprets it to mean "hurtful to me (*che, haru*)," i. e., "my enemies." Schuller (p. lxxxii) seeks an etymology from Guaraní *chana aharu*, "what mutilated people." This is in reference to cicatrices and other bodily mutilations. None of these etymologies is at all satisfactory.

CLARK UNIVERSITY,
WORCESTER, MASS.

BOOK REVIEWS.

The RGH Law in Philippine Languages. By CARLOS EVERETT CONANT. (Journal of the American Oriental Society, vol. XXXI, part I, 1910, pp. 70-85.)
9¼ × 6.

The Malayo-Polynesian or Indonesian speech family, seems to have possessed originally a consonant which is represented in the various individual languages, sometimes by *r*, sometimes by *g*, sometimes by *h*, and sometimes by *y*. This consonant is called the RGH consonant. Alongside of this there is another consonant which appears variously in the individual languages as *r*, *l*, or *d*, and is known as the RLD consonant. The changes of these two consonants constitute the most salient phonetic facts in the Malayo-Polynesian family. It is rather remarkable how the various speech families differ in their phonetic tendencies. In the Indo-European family of speech the most striking phonetic interchanges are in the realm of the stop sounds (the so-called Grimm's Law), in the Semitic family they lie in the domains of the sibilants and dental spirants, while in the Malayo-Polynesian family they have to do with the liquids *r* and *l*.

The present article is a discussion of the development of the RGH consonant in the Philippine languages. The following are the chief points made by the author. In the Philippine languages four groups are to be distinguished, according as RGH appears as *g*, *r*, *l*, *y*, viz.:

- (a) the *g* languages, Tagalog, Bisaya, Bikol, Ibanag, Magindanaw, Sulu, Bagobo;
- (b) the *r* languages, Iloko and Tiruray;
- (c) the *l* languages, Pangasinan, Kankanaï, Inibaloi, Bontok, Kalamian;
- (d) the *y* languages, Pampanga, Batan, Sambal.

The *g* languages consistently represent RGH by *g*, but in the case of the other groups some irregularities occur. In the *r* languages while RGH is regularly represented by *r* it also often appears as *g*. In these languages both *r* and *l* can not stand in the same "Grundwort," hence in a word containing both *l* and RGH, the latter may be represented by *g* (regularly in Iloko, also in Tiruray); or by *r*, with assimilation of the *l* to *r* (usually in Tiruray). In the *l* languages RGH is occasionally represented by *g* especially when an *l* occurs in the word, since two *l*'s can not stand in the same "Grundwort." In the *y* languages RGH appears only exceptionally as *g*.

Finally, at the end of the article a section is added on the three-fold origin of Philippine *g*, probably because *g* is the most common representative of RGH in the Philippine languages. One *g* is original *g*, a second belongs to the RGH series, and a third to the RLD series.

The article as a whole is an important contribution to the phonology of the Philippine languages, and will assist greatly in making clear the exceedingly complicated relationship of *r*, *l*, and *g* in these languages, but the arrangement of the material is not entirely clear and it is difficult to follow the development of the subject. The numerous remarks on peculiarities of the examples cited, which have no connection with the subject matter of the article, as, *e. g.*, the explanation of the initial *g* of Chamorro *gugat* (p. 71), or the pronunciation of the final stops in Ibanag (p. 73), would appear to much better advantage in foot-notes, where they would not interrupt the main discussion. There is no real reason why a special section should have been devoted to the origin of Philippine *g* more than to the origin of Philippine *r*, *l*, or *y*, and the discussion of the origin of any one of them, or at least of the first three, is hardly appropriate unless the RLD consonant is first discussed. It is to be hoped that Prof. Conant will shortly publish his material on the RLD consonant, and help to clear up still further the complicated relationship of *r*, *l*, *g*, *d*, and *y* in the Philippine languages.

FRANK R. BLAKE.

The Incas of Peru. BY SIR CLEMENTS MARKHAM, F.R.S. New York: E. P. Dutton & Co., 1910. Pp. xiii + 443, with 16 plates and map. (Price \$3.00.)

Sir Clements' interest in the Incas began when, as a naval cadet of fourteen, he visited Peru in H. M. S. Collingwood. He at once began to collect first hand information and to search through published and manuscript records for reliable sources. His narrative is the more interesting because he traveled extensively in the country and is personally acquainted with the localities he describes. He is thus able to apply his own experience to the interpretation of the early chronicles upon which he has depended for the greater part of his material. No one is as well equipped as he to write a history of the Incas. He has mastered their language and literature and for the past half century has been writing about the people and their country.

Many volumes have followed his first work, *Cuzco to Lima*, which appeared in 1856. His best service to the English-speaking public has been rendered in that splendid series of annotated translations of the old Spanish chroniclers. Twelve volumes have already been published

by the Hakluyt Society and six others—*Montesinos*, *Blas Valera*, *Balboa*, *Betanzos*, *Santillana*, and *Martin de Morua*—are ready for publication.

The book opens with a critical estimate of the principal authorities. "The story of the Incas had been told by priests, soldiers, lawyers, by mestizos and by pure-blooded Indians" and from a careful study of these the author writes his fascinating story. Cieza de Leon "stands first in the first rank of authorities"; Sarmiento is the best for historical events; Molina gives the best account of religious practices; Blas Valera and Garcilasso, the most interesting accounts of the life of the people. He calls attention to a recently discovered manuscript by the Indian Pomo de Ayala. Others are important as touching certain special topics: Calancha, the Inca calendar and the only account of the religion of the Chimu; Lazarraga, the wall between the territory of the Incas and the Collas and the image of the Sun which Leguisamo gambled away in a night. This was not the great image from the temple of the Sun in Cuzco, but a small one engraved on a gold covering for a sacred chicha receptacle. The other was concealed before the arrival of the Spaniards and was never found.

The next chapter deals with the unsolved mystery of the megalithic age. The doorway, the enormous size of the stones and excellent masonry at Tiahuanacu are described at length. (The author here fails to give credit to Stübel and Uhle, certainly the best authority.) All traditions tell us that the tribes which formed the megalithic empire came from the south. The ruins point to extensive dominion. In Cuzco there is a cyclopean building and some portions of the remains at Ollantaytampu are of the same type, but the grandest is the fortress of Cuzco. The monoliths near Abancay and the Chavin stone in the province of Huari belong to this period. The empire extended from south of Tucuman to Chalchapoyas, with Tiahuanacu as its center of rule. The most difficult part of the problem of Tiahuanacu is the climatic conditions. How could a region 12,500 ft. above the sea, so cold that corn can not ripen, sustain the population of a large city? Could the elevation have been less? Darwin says that near Valparaiso the land has risen 1,300 ft. and at San Lorenzo 500 ft. within modern times.

It does not appear to the reviewer that there is sufficient evidence to connect all these megalithic remains. Practically the only thing in common is the use of large stones. But at Tiahuanacu they are elaborately carved, squared, and nicely dressed, with doorways cut from enormous slabs; at Cuzco the very large rocks are used in the rough

state; while at Ollantaytampu the stones are beautifully dressed and standing on end with very thin slabs between. At Cuzco the cyclopean masonry is so connected with the other type that both must belong to the same period, and the same thing is true at Ollantaytampu. Some Maya scholars accept the Chavin stone as pure Maya handiwork, but no one would so accept the work at Tiahuanacu. Dr Uhle assigns them to entirely different cultures.

In reference to the change in elevation and climatic conditions about Tiahuanacu, it must be said that some geologists disagree with Darwin. The city was built with reference to the lake which extends more than a hundred miles from N.W. to S.E. across the plateau. The old lake beaches are horizontal and the walls and standing stones are all vertical. Hence both chains of the Andes must have been lifted equally and simultaneously, and this equilibrium maintained through an elevation of 3,000 ft. to meet the required conditions. Is it necessary to assume such a change in conditions? Today there is a very large population about the lake. The plateaus are covered with thousands of sheep and llamas and crops of *oca* and *quinua* are cultivated. La Paz, near by, and less than a thousand feet lower, contains a larger population than did ancient Tiahuanacu and until recently had no better means of transportation. Yet there has been no difficulty in providing a food supply. Fresh vegetables and all kinds of tropical fruits are sold in the market every day. With the strong centralized government that Tiahuanacu must have had, and the extensive domains, which included the valleys, the wants of the people were easily supplied. Again the climate is not so unlivable as 12,500 ft. and "too cold for corn" would seem to indicate. The location is within the tropics—less than 15° S. Even foreigners work, and play tennis and foot ball at greater elevations and enjoy life abundantly.

The author supports the authenticity of the list of a hundred kings of Peru given by Montesinos who evidently copied them from Blas Valera. The average reign of 25 to 27 years carries us back to 950 B. C., but, allowance being made for the succession of other heirs than sons, the initial date is about 200 B. C. The end of the early civilization was caused by an invasion from the south which resulted in breaking up the country into a number of petty, barbarous tribes. A remnant of the wise men took refuge near the Apurimac and there preserved the old religion and customs. After centuries of barbarism these more civilized children of the sun became predominant. Thus the rise of the Incas is satisfactorily explained.

The history of the Incas is very concisely treated. Tupac Upanqui is regarded as "the greatest man the American race has ever produced." Manco's date is given as about 1100 A. D., and the beginning of the line of the Incas with Rocca about 1200 A. D.

The difficult subject of Inca religion is well treated,—the cult of Uiracocha, believed in as the Supreme Being who was creator and ruler of the universe, and the religion of the people which was the worship of the founder of each clan. The Sun was adored as the father of the Incas. The hierarchy consisted of the high priest, a dozen chief priests, soothsayers, and virgins of the sun. These virgins were allowed to decide for themselves, after three years of education in the temple, whether or not they should dedicate their lives to the service of the Sun. The Incas believed in making visible offerings to deity and sacrificed animals of all kinds. The author thinks that human sacrifice was rarely if ever made. He neglects the evidence of Dr Uhle's discovery of sacrificed women at Pachacamac. This, together with the fact that at the time of the conquest there was a law prohibiting human sacrifice, would seem to prove that at an earlier date it must have been common.

The body of the Inca was embalmed, the palace of the deceased was set apart for the mummy, and it was endowed with lands so that offerings might be constantly provided. Three beautiful hymns to Uiracocha are given. The religious beliefs of the people were in harmony with the social system on which the government was based. We are sorry that the author does not tell us what he thinks of Uhle's belief that Uiracocha and Pachacamac were originally the same deity, that the worship of the latter on the coast dates from the time of the culture of Tiahuanacu, etc., etc.

Religious observances were dependent upon the calendar. The solstices and equinoxes were carefully observed by means of stone pillars. Five planets and many stars were named. The year was divided into twelve months of thirty days each with five added days at the end. One day was added each fourth year. The year began June 22, the winter solstice, with the harvest festival, and each month following had its special festival.

The Incas established one language throughout their dominions. This was not difficult because the separate dialects were but the debris of one original language spoken during the megalithic age. The accounts were kept by means of the *quipus* in the hands of trained officials, while pictures painted on boards preserved traditions, lists of kings, and historic events. Relief maps of clay were used by the Inca for

administrative purposes. Schools were established for the children of the royal families. Every lover of literature should read that most interesting relic of Inca learning, the drama "Ollantay," of which the author gives a new translation.

We formerly attributed to the Incas the origin and development of that splendid civilization found by the Spaniards, but the author brings out the fact that they only adapted their government to an ancient patriarchal system which was in vogue throughout the Andean region. The country, cut up by gorges and deserts, led to the formation of numerous separate communities, consisting of related families called *ayllus*. The land belonged to the *ayllu* and was assigned to heads of families. These *ayllus* united to form clans, tribes, and confederacies. The skill of the Incas consisted in systematizing these institutions and adapting them to the requirements of a great empire. This they did with an ability that has never been equalled.

The appendices include the List of Kings, Quichua and Aymara, Arts and Architecture, "Ollantay," and Folklore.

The term Aymara, as applied to the language spoken about Lake Titicaca is incorrect. The Aymara were a Quichua tribe, who were brought as colonists to the lake region where they learned the language of their new neighbors. The Jesuits came first to the Aymara and not knowing their history gave their name to the language.

A very complete list of Inca ruins is given but no description of architectural remains, as little can be added to Squier's accounts. For roads and bridges he refers the reader to Zarata, Leon, and Velasco, thus missing an opportunity to correct the exaggerated statements of some early chroniclers who have been copied by later historians and even by persons who have traveled in the country. If these great roads, running in every direction, thousands of miles of them, as we are told, were in the excellent condition reported, why did the Spanish soldiers have such difficulty with transportation and movements of troops and why did they complain so bitterly over the absence of trails? Why is there so little evidence of them today? For the most part they were merely wide, ungraded trails or parallel paths. The driven llamas were continually feeding as they went and did not confine themselves to a narrow road, except in the gorges where their own hoofs cut the grade. In a few places the roads were cut out of the rock and marshes were crossed by means of well-stoned roads, but one looks in vain for the beautiful macadamized highways of the historian's fancy.

The book is delightful, and will stimulate a new interest in this

most humane of the indigenous races of the New World. Let us hope that the author may yet give us the "detailed history" which he once had in mind to write.

WM. CURTIS FARABEE.

Notes Ethnographiques sur les peuples communément appelés Bakuba ainsi que sur les peuplades apparentées.—Les Bushongo. By E. TORDAY and J. A. JOYCE. (Annales du Musée du Congo Belge Publiées par le Ministère des Colonies. Ethnographie, Anthropologie.—Série III: Documents Ethnographiques, concernant les populations du Congo Belge, vol. II, part 1.) Brussels, February, 1911. 14½ × 10¾, pp. 1-291, plates I-XXIX, text figs., 1-403, map.

It is a matter of congratulation that we are beginning to obtain a better insight into the inner life of the tribes of Africa through thorough studies of various tribes. For a number of years this tendency has benefited particularly our knowledge of the material culture of the continent, but through recent works, such as Spieth's work on the Ewe, and Pechuël-Loesche's on the Loango, we begin to see the wealth of the mental life of the negro. The present work, conducted under the advice of Mr Joyce by the experienced explorer M. Torday with the assistance of Messrs M. W. Hilton-Simpson and Norman H. Hardy, is a contribution of first rank to our knowledge of African ethnology. Like all the publications of the Musée du Congo Belge, it is sumptuously printed and illustrated. Although the numerous half tones interspersed in the text perhaps do not quite reach the highest technical standard, they give an excellent idea of many sides of the life of the people. What they lack in detail is made up by the line engravings and the excellent plates that accompany the memoir.

It is difficult to say what part of the description of the authors is most interesting and important. The work opens with the legendary history of the people, the beginning of which is purely mythological, while later on historical elements seem to predominate. The comparative study of the history as recorded among various branches of the people leads the authors to the conclusion that the Bushongo migrated from the Shari into their present habitat between the Kasai and Sankuru. This conclusion is corroborated by a vocabulary of the Lumbila, a language which still exists in meagre rests and which, it is claimed, was spoken by the people until the middle of the eighteenth century (pp. 255 et seq.). According to Sir Harry Johnston this vocabulary shows certain affinities with a language spoken on the Shari (p. 43). Important is also the former occurrence of the throwing knife among these people (p. 36). While the combined arguments based on traditional history and on other

ethnographical data are very strong, we should hesitate to place quite as much reliance upon oral tradition as evidence of the earliest history of the people, as the authors do; and the assumption of a Berber origin of the reigning dynasty, based on the claim that their ancestor was of white color, does not seem well established on account of the frequent occurrence in all parts of the world of the idea of deities or ancestors of white color. Neither is the corroborative evidence of allied tribes quite to be relied upon, since reconstructed history is at least as likely to be accepted by neighboring tribes, as it is that an accurate history of very long periods should be correctly retained. The sources of inaccuracy must be still greater than those which are found in the recorded histories of the Sudan, which, for many years, had been kept as written records. For these reasons I should hesitate to accept the oldest chronological data and the whole sequence of 121 rulers as absolute historical truth, —as little as the endless genealogies of the Polynesians; and the history of the people before 1600 must certainly be considered as semi-mythological.

The political organization of the tribe presents phenomena of the greatest interest. The fundamental characteristics of African organization reappear here: the king and his numerous dignitaries, the female dignitaries, and the temporary transfer of power to a correlated administrative branch after the decease of the king (p. 63). Together with the descriptions of Pechuël-Loesche, Lias de Carvalho, and the over-systematized accounts by Dennett, they illustrate a most peculiar and complicated system of government, which is represented as far south as Natal, and as far north as the Niger region.

The description of initiation ceremonies is interesting, particularly the list of ethical precepts imparted in connection with it, the selection of which is determined by each ruling king. The police society with its friction drum is analogous to other African societies of this type. A recent origin is claimed for it (p. 87). The initiation ceremonies seem to lack in significance, a condition that has been often observed, but which must always be accepted with caution, because other facts may be kept secret by the informants.

Manifestations of social life, such as games, music, poetry are treated very briefly and are the least important sections of the work.

Marriage regulations, rules of descent, and taboos offer much that is of interest. Descent is in the maternal line, but group-taboos are primarily transmitted in the paternal line. These belong on the whole to villages. Tabooed animals may be killed, but not eaten. Although

this type of taboo is given a mythological origin, new taboos of the same type arise from time to time. It is claimed that in former times people who had the same taboo were exogamous. I should hardly accept the author's theory in so far as they see in these 'phenomena, "a degenerate totemism." A certain social community exists also among children born in the same month.

The observations on magic and divination contain much that corroborates the more recent descriptions of African fetishes.

The notes on agriculture, hunting, and fishing may be only mentioned here. The traditional history of the tribes in regard to the introduction of Indian corn and maniok is evidently based on facts. Among the devices for fishing a basket trap with release and floats, under which the fish assemble are perhaps worthy of special note. The description of the houses and villages is rather brief, but that of personal dress and adornment, cicatrization, and treatment of teeth is full and accompanied by many instructive illustrations. The various industries are adequately described, but the most important portion of this part of the book is the chapter on art with its wealth of illustration and of information regarding native names of designs. After a discussion of realistic motives, the authors describe the textile designs and their curious names. The observation that the designs are always named according to certain component elements, and the differences in naming that occur in the woman's art of weaving, and in the man's art of carving (p. 216 et seq., 227), although the men apply textile motives, are of great theoretical importance. A number of traditions and brief notes on the language are also given. In a final chapter are contained ethnographical notes on the Basongo Meno, a group of related tribes.

If in view of the excellence of this work a wish might be expressed, it would be that at least legends, poetry, proverbs, and related subjects had been given in the authentic form of original records, the importance of which does not seem to be recognized yet by all ethnologists.

FRANZ BOAS.

The Niger and the West Sudan: the West African's Note-Book. By A. J. N. TREMEARNE. London: Hodder and Stoughton (Arthur H. Wheeler and Co.), 1910. 8°, pp. 151.

Tremearne's book is intended as an assistance, a *vade mecum*, for the man going to British West African Colonies. It gives history, conditions, hints, advice upon a hundred points where detailed information is necessary. It is called a "notebook" because it is largely compiled from many

sources, in the very words of the original, and makes no pretence of being a literary production. One third of the book, that is fifty pages, is devoted to native peoples, who are considered under chapter headings—the Filani and others, the Hausas and others, the Yorubas and others. While these chapters have appeared as independent articles elsewhere they are here usefully presented together. Tremearne prefers the spelling Filani to the more common Fulah. In the ethnographic part of his work, as elsewhere, the matter is chiefly quotation. In each case, however, the author adds some personal comment in which he tries to make some deductions from the mass of conflicting statements. Chiefly interested in sources, he sees in the Filani a people where Berber and Negro have mixed; in the Hausas, a Semitic population from the region of Ethiopia or west from there, which has Hamitic and Negro infusion and which has moved westward; in the Yoruba, a population more distinctly Negro, but showing influences from north and east. It is not easy to grasp his views exactly.

FREDERICK STARR.

Nigerian Studies; or the Religious and Political System of the Yoruba. By R. E. DENNETT. London: Macmillan and Co., 1910. 8°, pp. xvii, 235.

This is Mr Dennett's fourth book on African peoples. Heretofore he has dealt with the Fjort, near the mouth of the Congo; this time he studies Nigerian populations. Everyone must appreciate the good-will and the industry of the author but his style is always confused to the degree that most students can gain only confused hints from reading him. This time he is dealing with populations which have already been described by others and his lines of treatment are more clear and decisive, and he makes many quotations which enable him to be better followed than usual. His proof too has been read by Mr Joyce, which has perhaps given the work more consistency and form than it would otherwise have. Even with these advantages, the confusion persists nor does Dennett's explanatory chapter completely explain it. Everyone realizes the difficulty of securing complete, consistent, and satisfactory information from natives—especially regarding social, governmental, and religious matters; and the vice of rounding out what one secures, by such filling as fancy, theory, or literary ideal demands, can not be too severely deprecated; but there is a middle course and fortunately our best field workers succeed in finding it. The man whose mind is clear and systematic can present things, even fragmentary and indefinite things, in comprehensible form.

In his introduction Mr Dennett emphasizes, what must strike everyone who reads his text and notes with care, the considerable number of native Africans who are now writing in regard to their own old life, customs, languages, and ideas. As this local literature is quite unknown to students generally, his remark is here quoted "Bishop Johnson gave us a little work on Yoruba paganism. . . . Bishop Phillips wrote a little book called *Ifa*. The Rev. Lijadu has given us *Ifa* and *Orunanila*. Mr Sobo wrote Arofa odes or poems. Dr Johnson has lectures on Yoruba history and Mr John O. George has written a short account of Yoruba history. Dr Henry Carr, . . . native of Egboland is an author of many interesting papers and keys to mathematical works. Mr Adesola is . . . writing . . . of Yoruba Death and Burial secret societies . . . in the Nigrian Chronicle. Mr Johnson is the editor of this paper . . . Mr Williams and Mr Jackson are editors of The Lagos Standard and The Lagos Record." Mr Dennett's book contains much of interest. Sacred stones are common in Nigeria and he calls attention to several. Some of them have distinctly phallic associations; others, while probably phallic, are believed to be transformed human beings, and, curiously, some of these are referred to persons who have undergone transformation within the memory of persons still living. Thus, Moruni and her son Alashe were turned into stones to which respect is paid, yet the houses in which they lived are still pointed out and Alashe's stone seat is now in the British Museum. Some interesting facts regarding the "bull-roarer" and its phallic associations are given; two quite different forms occur — both male, one older and one younger. *Oro*, who is represented by the bull-roarer, not only gives children but arrests disease and prevents death; while clearly phallic, the bull-roarer is not used in the male mysteries, as in Benin and Geduma, nor in initiation ceremonies. Dennett's information regarding times and days is interesting, as are his facts regarding divination by palm-nuts. He gives an extended discussion of the *Orishas* or divine beings, taking them in detail, one after another. Of course he comes to "categories" before he ends and finds six fundamentals, from which he develops an entire system of cosmogony, philosophy, sociology, and government. In the final working out of the system he finds identity between the Nigerians and the Fjort. Considering the complexity of the system this identity is a little distressing even when confined to Africa: here, however, as in his *Behind the Black Man's Mind*, Mr Dennett finds the system the same as that of Great Britain and identifies each item in the British social and governmental structure — even to the Archbishop of Canterbury and the House of

Lords. One can but wonder what Mr Dennett will do when Mr Lloyd George gets through with the House of Lords. No doubt a destructive tendency at work in Nigeria, will complete its work simultaneously with that in Britain.

FREDERICK STARR.

Collection de Monographies Ethnographiques. VI. *Les Kuku.* By JOSEPH VANDEN PLASS. 1910. 8°, pp. xlii, 407. VII. *Les Ababua.* By JOSEPH HALKIN, with collaboration of ERNEST VIAENE. 1911. 8°, pp. xv, 616. VIII. *Les Mandja.* By FERNAND GAUD, with collaboration of CYR. VAN OVERBERGH. 1911. 8°, pp. xxiv, 574. Bruxelles: Albert Dewit.

Three new numbers have recently appeared in the great collection of ethnographic monographs of African tribes being published under the direction of Cyr. van Overbergh. These deal with central African tribes and are due to three different authors. The exhibit at the Brussels Exposition of 1810, made in connection with these monographs was most interesting and instructive. In the Preface of the volume relating to the *Kuku*, Mr van Overbergh presents a detailed statement of the idea and plan of this exhibit. It consisted of two parts — documentary and display. The content of the former is concisely stated as follows: "More than 300,000 data regarding Negro Africa. These data transferred to separate cards, always classed in the same order, are comparable at all times in response to 202 questions, comprising all the social phenomena of the populations." These data have been brought together by a thorough search of printed sources and from answers oral and written to a series of inquests conducted both in Europe and Africa. It is from this enormous mass of documentary material that the volumes of the series so far printed have been constructed and from it the volumes to be written will be made. The classification is based upon the Questionnaire drawn up by Professor Joseph Halkin, of Liège, for the Belgian Society of Sociology. The labor involved in the mere accumulation of this material has been enormous but its value (and the labor) has been multiplied by its systematic classification. For it has been rigidly classified in four different fashions: (1) by authors, in alphabetical order; (2) by tribes, in alphabetical order of names; (3) by geographical regions; (4) by matter. This mass of documents, together with the Ethnographic Monographs so far issued, and dummies of the volumes ready for publication, formed the first part of this remarkable exhibit. The second part was a form of museum display containing some novel and suggestive features. It was but a section, taken from a proposed whole, to show possibilities. The thesis proposed was: "A modern museum ought to devote a part of

its halls to the temporary or permanent exposition of all social phenomena, in a manner to strikingly bring out the resemblances and differences of the most typical peoples." Seven social phenomena are recognized — the social, the economic, the genetic, the esthetic, the ideologic, the moral, the juridical, the political. As it was impossible at the Brussels Exposition to illustrate all of these phenomena, attention was focused upon a single phase of the ideological phenomenon — the religious. The Fang were selected as a single people for illustration and the notable collection brought together by Father Trilles, property of the Neuchatel Museum, was used in making the demonstration. The religious phenomenon among the Fang occupied a great alcove, objects and explanations covering three walls and filling floor cases. Two divisions were made of the material; (a) the religious phenomenon proper, (b) the religious life in its social phenomena. Under (a) were considered: (1) totem, (2) manes, (3) secret societies, (4) God; and each of the first three of these was exemplified in belief, worship, magic, priest (sorcerer, fetichman), future life. Similar analysis and procedure were applied to religion in its social phenomena. The careful selection, striking display, and instructive labeling and explanation of objects made a notable exhibit. The practicality and development possibility of the idea were made clear by the inscription accompanying a plan for "the palace of fetichism" drawn up by architect Horta. It reads: "If one should represent in a special museum — in the manner here employed for the Fang and for the religious phenomenon — each of the social phenomena; if one should do the same for the type populations of Africa, of Australia, of Asia, of America, in such a way that each phenomenon (documentation and objects) might be compared in its *ensemble* and in each of its subdivisions; one will have realized the Sociological, Colonial and Ethnographic Museum-type. If one confined himself to the representation of the religious phenomenon one would have the 'Museum of Fetichism' of which the accompanying plan was proposed for the Universal and International Exposition of Brussels (1910)." We have thought it worth while to call some attention to the plan here outlined by its author, Cyr. van Overbergh. The volume *Les Kuku* deals with a little-known population living in the Lado Enclave, for a time under the control of the Congo Free State, now a part of the Anglo-Egyptian possessions. So little has ever been said by anyone else of the Kuku, that the volume is practically a new work by Joseph Vanden Plass, long in the employ of the Congo Free State and Congo Belge. It is a clear and straightforward presentation of the more evident facts of daily life and government but is weak in the

important matters of native thought, as exemplified in kinship, magic, belief, and religion. The Kuku live in a rolling country of grass and small trees; they have little knowledge of rivers or considerable water-bodies; they are agriculturists and much interested in cattle. Men go naked—a rather unusual practice among Congolese tribes; rather interesting are the facts regarding “the chief of water.”

In volume seven of the series, *Les Ababua*, by Professor Halkin, of the University of Liège, with the collaboration of Col. Ernest Viaene, we have an expansion of a book published several years ago by Professor Halkin under the same title. Our readers will remember that the whole undertaking of these Ethnographic Monographs grew out of the Mondial Congress held at Mons, Belgium, in 1905. There the scheme of an International Ethnographic Bibliography was launched. Halkin himself has been the chief worker in the preparation of the mass of 300,000 data already mentioned; he was the author of the 202 questions, which have served to classify these data; it is he who has recently prepared a *Cours d'Ethnographie et Géographie ethnographique* for the use of African observers. His original *Les Ababua* was tentative. The new work is a great increase upon the old one; that contained a half-page bibliography, this has 10 pages; that had no iconography, this gives 11 pages to a list of iconographic material; that has 170 pages of text, this has *apparently* 600. The material in the new volume is chiefly compilation, but there is interesting new matter. The best source drawn upon is de Calonne, who knew what was most important. Ababua is a general term applied to a group of kindred tribes, living north of Stanley Falls, in the valleys of the Uele, Itimbiri and Aruwimi rivers, in the administrative District Uele. They are usually known as “the terrible Ababua,” “the fierce Ababua.” They are hardly entitled to the designation, which they probably owe to the Azandeh, who were interested in maintaining the fiction. De Calonne supplies considerable interesting matter relative to totems, magical ideas, and stories. His *Mba* stories are only part of a large series, still mostly unknown. *Mba* is the cunning hero, who is always being fooled. Linguistic matter is introduced into all three of the volumes before us. All of it appears to be new and hitherto unpublished.

In the volume *Les Mandja*, the series go for the first time outside the Belgian area; for the Mandja live in Congo Français. The author, Fernand Gaud, is a French colonial author. Only a few thousand Mandja remain but those cling persistently to their soil, although islets of Banda have found lodgment among them. Their country lies somewhat to the west of the Ababua, on the Ubangi River, about where it

turns abruptly to the south. They appear to differ notably from other tribes of the region. Thus, we are distinctly told that they have no markets, no objects buried with the dead, no slaves, no palavers, no clubhouse, no council. Our author, repeatedly too, insists upon the incapacity of the people in thought, language, and expression. We can but doubt some of these negatives and limitations. The Mandja make fire by friction of wood by the plowing method; they wear labrets; they have the interesting "silent exchange," which is described in detail. Gaud has had a special scientific training — he is a chemist — and, while we feel doubtful of his gaps, we have to thank him for some specially careful, exact, and novel observations. His detailed description of the narrowing of the slit in the great wooden gong-drum is fine; his description of native salt-making the best we know; his list of cultivated plants, arranged according to use, runs to thirty species; his calculation of the actual labor necessary to produce a harvest is interesting in itself and of practical significance in the direction of the limits to place upon labor demands in corvee and rubber-gathering; his calculations of nutrition and of muscular force are valuable and original.

FREDERICK STARR.

SOME NEW PUBLICATIONS

AMEGHINO, FLORENTINO. *La antigüedad del hombre en la República Argentina*. Buenos Aires: 1911. $6\frac{1}{2} \times 10\frac{1}{4}$, 52 pp.

AMERICAN ANTIQUARIAN SOCIETY. Manuscript records of the French and Indian war in the library of the Society. Prepared from the originals under direction of the Library Committee by Charles Henry Lincoln. (Trans. and Coll. Amer. Antiq. Soc., vol. XI.) Worcester, Mass., 1909. $6\frac{1}{4} \times 9\frac{3}{4}$, 267 pp.

BLEEK, W. H. I., and LLOYD, L. C. *Specimens of Bushman folklore*. With an introduction by George McCall Theal. London: George Allen & Co., Ltd., 1911. $5\frac{1}{2} \times 8\frac{1}{2}$, xl, 468 pp., 50 ills.

BOAS, FRANZ. *The Mind of Primitive Man*. New York: The Macmillan Co., 1911. 12°, pp. 304. (Price \$1.50 net.)

BRIGHAM, WM. T. *Ka hana kapa*. The making of bark-cloth in Hawaii. (Memoirs Bernice Pauahi Bishop Museum, Vol. III.) Honolulu: Bishop Museum Press, 1911. 10×13 , 273, iii pp., 48 pls., 131 figs.

BRUNHES, JEAN. *La géographie humaine*. Paris: Félix Alcan, 1910. $6\frac{1}{2} \times 10$. iv, 843 pp., 206 ills.

BUREAU OF AMERICAN ETHNOLOGY. Twenty-seventh annual report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution. 1905-1906. Washington: Government Printing Office, 1911. $7\frac{1}{2} \times 11\frac{1}{4}$, 672 pp., 65 pl., 132 figs.

In addition to the administrative report of the Chief of the Bureau, the volume contains (pp. 17-672) a memoir on the Omaha Tribe by Alice C. Fletcher and Francis La Flesche.

CAMPBELL, REV. F. J. Pioneer priests of North America, 1642-1710. Vol. III—Among the Algonquins. New York: The America Press, 1911. $6\frac{1}{4} \times 9$. xxii, 312 pp., ills.

FLETCHER, ALICE C., and LA FLESCHÉ, FRANCIS. See BUREAU OF AMERICAN ETHNOLOGY.

GALLARDO, CARLOS R. Tierra del Fuego. Los Onas. Buenos Aires: Cabaut y Cía., 1910. $6\frac{1}{2} \times 9\frac{1}{4}$, 395 pp., ills.

HANNA, CHARLES A. The Wilderness Trail or the ventures and adventures of the Pennsylvania traders on the Allegheny path [etc.]. New York: G. P. Putnam's Sons, 1911. 2 vols., $6\frac{1}{4} \times 9\frac{1}{2}$. xxiv, 383; vi, 457 pp., maps, ills.

HOPKINS, WM. JOHN. The Indian book. Boston and New York: Houghton Mifflin Co. [1911]. $5\frac{3}{4} \times 7\frac{1}{2}$. viii, 239 pp., ills. (after Catlin).

A collection of Mandan Indian tales in simple form for popular reading.

JONES, ARTHUR EDWARD, S.J. "8endake Ehen" or old Huronia. (In Fifth Report of the Bureau of Archives of the Province of Ontario, 1908.) Toronto: 1909 [1911?]. $6\frac{1}{2} \times 9\frac{3}{4}$. x-xxxii, 505 pp., ills.

KROEBER, A. L. Phonetic elements of the Mohave language. (University of California Publications in American Archaeology and Ethnology, vol. 10, no. 3, pp. 45-96, pls. 6-20.) Berkeley: University Press, 1911.

LONG, J. SCHUYLER. The sign language. A manual of signs. Being a descriptive vocabulary of signs used by the deaf mutes in the United States and Canada. Washington: Press of Gibson Bros., 1910. $5\frac{1}{2} \times 9$, 164 pp., 28 pls.

LLOYD, J. WM. Aw-aw-tam Indian nights. Being the myths and legends of the Pimas of Arizona as received by J. William Lloyd from Comalk-hawk-kih (Thin Buckskin) thru the interpretation of Edward Hubert Wood. Westfield, N. J.: The Lloyd Group, [1911]. $5 \times 7\frac{1}{2}$, iii, 241 pp., frontis.

MACCURDY, G. G. A study of Chiriquian antiquities. (Memoirs Connecticut Academy of Arts and Sciences, vol. III.) New Haven: Yale University Press, 1911. $9\frac{1}{2} \times 12$. xx, 249 pp., 49 pls., 384 figs., map.

MARTIN, Mrs JOHN. Is Mankind advancing? New York: Baker and Taylor Co., 1910. 302 pp.

See review by James Harvey Robinson, Professor of History in Columbia University, in *The Survey*, New York, May 6, 1911.

MINER, WM. HARVEY. The Iowa. A reprint from *The Indian Record*, as originally published and edited by Thomas Foster, with introduction, and elucidation through the text. Cedar Rapids, Iowa: The Torch Press, 1911. $5\frac{1}{2} \times 8$, xxxv, 100 pp., ills., map.

MOLBECH, O. C. Indianerlio et døende folks saga. København: Kunstforlaget "Danmark," 1911. $4\frac{1}{2} \times 6\frac{3}{4}$, vi, 248 pp.

MOORE, CLARENCE B. Some aboriginal sites on Mississippi river. (Reprint from Journal of the Academy of Natural Sciences of Philadelphia, vol. XIV.) Philadelphia: 1911. $10\frac{1}{4} \times 13\frac{1}{2}$, pp. 367-480, pls. xxix-xxxvi, 83 figs., 2 maps.

MYERS, CHARLES S. An introduction to experimental psychology. Cambridge (England): University Press, 1911. $4\frac{3}{4} \times 6\frac{1}{2}$, vii, 156 pp.

OUTES, FÉLIX F. Los tiempos prehistóricos y protohistóricos en la provincia de Cordoba. (Reprinted from Revista del Museo de la Plata, XVII 2^a ser., IV). Buenos Aires: 1911. $7\frac{1}{2} \times 11$, 3 leaves, pp. 261-374, ii, ills.

PREHISTORIC SOCIETY OF EAST ANGLIA. Proceedings for 1908-9 and 1909-10. Vol. I, pt. I. London: H. K. Lewis, 1911. $5\frac{1}{2} \times 8\frac{1}{2}$, 121 pp., ills.

REID, W. MAX. Lake George and Lake Champlain. The War Trail of the Mohawk and the battle ground of France and England in their contest for the control of North America. New York: G. P. Putnam's Sons, 1910. $6\frac{1}{2} \times 9\frac{1}{2}$. xviii, 381 pp., 84 ills., 2 maps.

SAPIR, EDWARD. Takelma texts. Philadelphia: University Museum, 1909.

SEITZ, DON C. Letters from Francis Parkman to E. G. Squier. With bibliographical notes and a bibliography of E. G. Squier. Cedar Rapids, Iowa: Torch Press, 1911. $6\frac{1}{2} \times 9\frac{1}{2}$, 58 pp.

SEMPLE, ELLEN CHURCHILL. Influences of geographic environment on the basis of Ratzel's system of anthropo-geography. New York: Henry Holt & Co., 1911. $5\frac{1}{2} \times 8\frac{3}{4}$, xvii, 683 pp., 21 maps.

SKEAT, WALTER W. English dialects from the Eighth Century to the present day. Cambridge: University Press, 1911. $4\frac{3}{4} \times 6\frac{1}{2}$, ix, 139 pp., pl.

SPILLER, G., *editor*. Papers on inter-racial problems communicated to the First Universal Races Congress held at the University of London, July 26-29, 1911. Boston: Ginn and Co.; London: P. S. King and Son, 1911. $6 \times 9\frac{3}{4}$, xvi, 485 pp.

WATERMAN, T. T. The phonetic elements of the northern Paiute language. (University of California Publications in American Archaeology and Ethnology, vol. 10, no. 2, pp. 13-44, pls. 1-5.) Berkeley: University Press, 1911.

WINCHELL, N. H. 1906-1911. The aborigines of Minnesota. A report based on the collections of Jacob V. Brower, and on the field surveys and notes of Alfred J. Hill and Theodore H. Lewis. Published by the Minnesota Historical Society. St. Paul: 1911. $9\frac{1}{4} \times 12$, xiv, 761 pp., ills.

WINTERNITZ, M. Der Religionen der Inder: Der Buddhismus. Tübingen: Verlag von J. C. B. Mohr (Paul Siebeck), 1911. $6\frac{3}{4} \times 10$, vi, 214-329 pp. (From *Religionsgeschichtliches Lesebuch*.)

ANTHROPOLOGIC MISCELLANEA

The Stone Collars and Three-pointed Stones of the West Indies.—

The object of this brief note is to present what I believe to be the true explanation of the stone collars and three-pointed idols found in Porto Rico and Haiti.

Apart from precise declarations as to the character of these objects, the deductions as to their ceremonial and other uses are based on analogies in comparative ethnology, are in no sense exhaustive, and are advanced with proper reserve on the evidence of the stones themselves. The writer has examined with care the splendid collection in the National Museum at Washington, the largest and most complete in the world, and has used information gathered during many visits and a somewhat protracted residence in Cuba during the last twelve years.

The pre-Columbian population of the Antilles was, in Cuba, Haiti, and Porto Rico, Tainan-Arawak, closely related to the existing Arawak tribes of the Guianas in South America. They were being exterminated by the fierce Carib who, sweeping up through the Lesser Antilles, had at the time of the first voyage of Columbus established a foothold on Porto Rico and controlled perhaps a fifth part of Haiti. Had the Spanish conquerors not arrived, another century of Carib advance would have been equally disastrous to the peaceful Arawak.

I am much indebted to Dr Jesse Walter Fewkes, of the Bureau of American Ethnology of the Smithsonian Institution, and to his excellent report on the "Aborigines of Porto Rico," to which I shall make constant reference. Dr Fewkes writes (page 167 *supra*):

"The theories which have been advanced in explanation of the use of the Porto Rican stone rings are almost as numerous as the writers on the subject, but unfortunately not one of the theorists has carried his hypothesis far beyond a simple suggestion."

Dr Fewkes' conclusions were that no theory thus far advanced possessed more than the merit of plausibility.

Basing this study of the stone rings on Dr Fewkes' type-form (our figure 58) and the slender ring represented in plate LXVIII (our figure 59) and described on page 165, I state unhesitatingly that the slender ovate rings represent the female sex-organ expanded as at the moment of parturition. The boss or swelling at the top is the *mons veneris*. The

decorated panel is the uterus, with the vagina and vagina orifice at the base. The undecorated panel shows the bladder with the urethra depending, and at its base the urethra orifice. The band across the urethra represents the urethral sphincter.

Referring now to plate LXVII panels of slender ovate collars (rings), Latimer collection, figure *a* shows an extremely conventionalized fetal ovum. Figure *b* exhibits a conventionalized uterus in detail with ovaries, fallopian tubes, os uterus, and an exaggerated fetal ovum in the center, all etched in outline. Figure *c* shows a conventionalized double fetus

with characteristic curvatures. The carving on the ridge is an even more graphic representation of a developed fetus.

These characteristics appear with marked regularity on all slender rings. I am disposed with some reserve to regard all massive rings as unfinished specimens, in process of development to the slender ovate type. Inasmuch as each highly finished ring represented a great amount of labor, it is reasonable to hold that there should appear a proportion of uncompleted specimens. Examination of the "elbow stones" convinces me that they are the panels of rings, broken perhaps in the process of manufacture and then finished as fragments. Several of

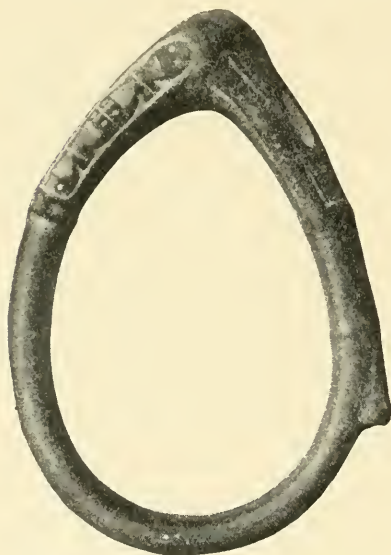


FIG. 58.—Type-form of stone ring.
(After Fewkes.)

these show the uterine markings. I have failed thus far to discover a significance in the right and left character visible in the slender rings.

I wish here to interpose the view that these rings involved two processes of manufacture certainly, and possibly three: first a process of spalling by the application of a quick and intense heat to localized sections of the stone to be carved, followed by application of water. By this means the stone was rapidly reduced in the rough to approximately the dimensions and shape desired. Following this treatment came a pecking with harder stone than the object and it is well to call attention to the fact that in both Haiti and Cuba were to be found

quantities of meteoric and magnetic iron. While the Arawak are not known to have possessed any knowledge of iron-working as they had in a limited way of gold-working, they had ample opportunity to utilize the superior hardness of native iron whether with an edge or not. I have seen several specimens of stone work which showed that a herring-bone pattern was pecked into the stone and then the intervening ridges broken down as a part of the process of reduction. The final process was one of smoothing and polishing by grinding. In this direction the Arawak had arrived at a high degree of expertness. As bearing on the use of heat for spalling, it is certain that the Arawak made and used charcoal, not only for culinary purposes, but for burning pottery. They also knew and had access to asphaltum, and pitch and other inflammable gums. I have reason to believe that they knew how to use a primitive blowpipe and could produce a blue flame to aid in boring holes in stones. Furthermore, they had most naturally discovered the effect of fire on lime carbonate rock, and I have seen places where it seems evident that they had used mortar and a crude cement. The Arawak were not especially gifted with prevision and invention, but the exceptional individual possessed those mental qualities, as among all peoples, and therein lay the secret of tribal advance toward a higher cultural state.

The three-pointed idols, for present discussion and for convenience, I have divided into two classes, of which plate XL of Dr Fewkes' work (pl. XXIX herein) is a good example of one and plate XLV contains examples of the second. Plate XL typifies the protuberant abdomen of the pregnant female, with at one end a head presentation of the child. Many of these three-pointed stones show at one end the head presentation and at the other the breech presentation. Sometimes there is

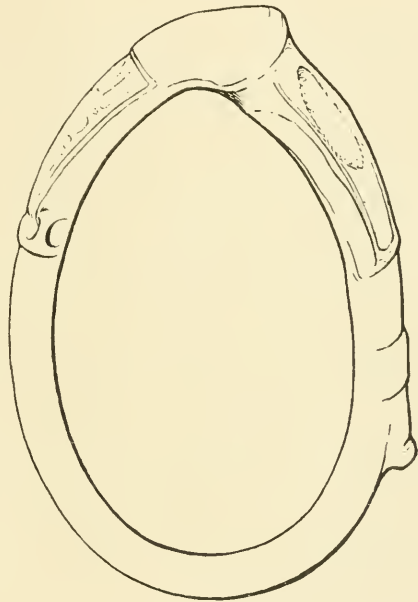


FIG. 59.—Schematic drawing of a slender, oblique stone collar.

the representation of a bird or animal head at one point. This is, perhaps, an indication of the clan or family.

I will now suggest the uses of these objects, with, as stated in the beginning due reservation:

First we have ample evidence of the exogamous character of the Tainan-Arawak marriage customs, with emphasis on the preponderant strength of the female ties. Frazer dwells sufficiently on this in his work on totems, and refers at some length to Hilhouse, British Surveyor of Demerara, who married an Arawak woman and who wrote with personal knowledge of their clans and customs. It is a reasonable assumption that this emphasis on the female line should have had a marked bearing on the development of a cult, religious and ceremonial, in which female phallicism played a conspicuous part. Sexual function and anatomy are almost invariably understood by all primitive peoples. I suggest that these stone rings had not only a part in the ceremonial invocation of fertility of soil and race mentioned by the Spanish writers but several practical uses. They were probably exhibited to the pregnant woman about to be confined to develop by auto-suggestion the thought of an easy delivery, but may have been used as an aid to delivery in a crude form of obstetrics, by being placed over the abdomen of the woman in the pangs of childbirth. Similar uses have been ascribed to the stone yokes found in Mexico, by Professor W J McGee, and I have been told by army officers that they have seen Indian women aided in delivery by the use of heavy cinctures tightly drawn across the abdomen.

A very recent book *La Obstetricia en Mexico*, by the well-known Mexican gynecologist, Dr Nicolas León, gives much interesting material of customs among the cognate pre-Columbian peoples of that country. He shows the yoke placed across the abdomen and its use as a "silla para al parto," that is a delivery chair. From the shape and character of the stone rings both slender and massive, they may well have been used for this identical purpose by the Arawak shamans. A crouching posture in delivery, clinging with the hands to an overhead support, was a usual one with primitive people. Many of the Mayan sculptures and pictures show this position. The Mayan literature furthermore shows long and complicated religious ceremonials attending every stage of pregnancy. Peter Martyr asserts that in 1518 a settlement was visited on the coast of Yucatan where the same language was spoken as in Cuba. It is recorded that Columbus met on the south coast of Cuba large trading canoes laden with the rich products of Yucatan, and Spanish writers claimed that there was commerce between the two countries.

At this distance from a people who have disappeared as a nation, there can be only speculation as to ceremonial usages. The ceremonies probably varied from generation to generation, from island to island, even from one petty cacique to another, and I doubt if the Arawak had been sufficiently long in any of the principal Antilles to have developed the high ceremonial which follows after many generations of fixed residence. But I wish to call attention to a quotation from Landa, given by Dr León, to the effect that the Maya placed at the foot of the bed of a woman in childbirth the idol of a female demon, "que dazian era la diosa de hacer las criaturas."

In line with the collateral testimony given above I suggest that the first type of three-pointed stones was exhibited to the married woman to suggest fertility, and that a ceremonial development of this idea may be predicated.

The second type of three-pointed stone was perhaps exhibited to the betrothed maiden, and had a prominent place in the marriage ceremony, of which the rupture of the hymen was a feature. There is ample authority for asserting that many persons had access by privilege of the first night and it is to be presumed that the bride had to be prepared in advance for the ordeal. The curved bases of both types of three-pointed stones suggest their use ceremonially and practically, in connection with the collars, by being placed on the abdomen of pregnant women.

In respect to the use of the blowpipe I have seen Mosquito Coast Indians use the long hollow bones of the *rabihorcador*, or frigate bird, with a burned clay tip as a blowpipe for soldering, and they have Carib and probably some Arawak blood. The Arawak compressed the heads of their infants exactly as did the Maya and had many of the same habits, customs, and characteristics.

I will conclude with a quotation from León's *Obstetricia en Mexico*, page 49.

"Todas las tribus indias del México precolombino tenían en alta estima el poder fecundante de la naturaleza, manifestado en un modo tan especial en la procreación humana, y la deificaban en los órganos mismos de ella. Por eso es que encontramos tantas imágenes fálicas en sus antigüedades, y en estatuaria, ya en pictógrafos, siendo notable entre estos una de las láminas del 'Codex Borbónico' y también en retrato del sabio rey de Texcoco Netzahualcoyotl que ostenta por divisa, en su escudo guerrero, el geroglífico de la vulva femenina, no para indicar su amor á la incontinencia, como algun moderno escritor lo ha dicho, sino para simbolizer su veneración á la generacion humana."

HERBERT JANVRIN BROWNE.

Mr Bushnell's Review of "The Stone Age."—In the January-March *Anthropologist*, vol. 13, no. 1, on page 153, appears a review of my recent work, *The Stone Age in North America*. I have never published a reply to any criticism of my works. In fact, I always welcome criticism; but this review by Mr Bushnell is so unfair and exhibits such ignorance of stone age times in America that I crave permission to reply at some length.

If Mr Bushnell had read *The Stone Age* he would have observed that the classification made use of by me is the one adopted by the American Anthropological Association at the Baltimore meeting, 1908; that this classification was not complete but a skeleton classification; that classifications of such objects as were not considered by the committee were made by me in addition, but it was explicitly stated by me that several of these were not entirely satisfactory,—as an example, the classification of bone implements, page 134, vol. II.

The classification of pipes is that by Mr J. D. McGuire, and not my own at all, and copper objects are classified by Mr C. E. Brown. Mr Bushnell's statement that the classifications are according to my own conceptions is not correct and his further statement that the work is valueless is an affront to the committee which drew up the original classification, as well as to all the distinguished archeologists and ethnologists who either wrote papers for *The Stone Age* or permitted lengthy quotations from their publications.

It was stated in the preface, vol. I, page v, that the work is incomplete; and on page 357, vol. II, that the work is pioneer in its character. There are in a score of places throughout the two volumes references to the fact that future archeologists will expand or change many of my observations, etc. Mr Bushnell completely ignores all of these references, and he quotes my statement to the effect that men who study modern material have not a clear perspective of the past—that is, of pre-Columbian conditions. He says that this is a key to the whole work. He implies that I am in error. The statement is true, and I stand back of it. It is because the bulk of implements and works in this country are not known to existing tribes, or were not known to the tribes of the past two centuries that it becomes necessary for such studies as are set forth in *The Stone Age*. For instance, the earthworks of the Ohio valley can not be explained by a study of any historic tribes of which we have knowledge. While one may find references in the accounts of Spanish historians to mounds, yet the geometric earthworks so common in the Middle West must be solved through archeology, for history will not aid us. Neither can the remarkable objects and altars found in the Scioto

valley, Ohio, be explained through the study of historic tribes. The arrow, the spear, the hatchet, the pot, and many other things have been in use in historic times and I not only stated so in my book but quoted numerous authors to that end. All of this Mr Bushnell has overlooked

Mr Bushnell takes satisfaction in pointing out that the Chippewa Indians still use bone celts. I spent seventeen weeks on White Earth reservation, Minnesota, and made a list of all the full blood Chippewa Indians on that reservation for the Interior Department. Our party had engaged the oldest full blood Indians as witnesses. Our interpreters were competent. We came in contact with more Indians than we would have done had we been engaged in ethnological work; yet we did not find a single bone or stone tool in use among these Indians, although diligent inquiry was made, and there are 5,300 Chippewa on or about that reserve. There may be a few Chippewa in Canada who use bone hide-scrapers, but that has no more relation to my argument than the fact that Major Powell or Lewis and Clark saw bone scrapers, or bone gouges, or any other kinds of bones or flints in use among historic Indians.

Mr Bushnell states that my chapter on "the population in prehistoric times" contains contradictory and ambiguous statements. I was very careful to indicate in that chapter the difference between historic and prehistoric sites. If Mr Bushnell will take pains to study the prehistoric sites in the Tennessee, Cumberland, Scioto, Susquehanna or other river valleys and compare these with the known Cherokee, Shawnee, or other historic sites he will observe the great quantity of material found on one and the absence of it on the other. The population in prehistoric times can not be measured by our knowledge of the population in historic times. We must decide the question through a study of surface conditions.

Regarding the stone age in historic times, Mr Bushnell states that ". . . the author disposes of the subject by quoting a few paragraphs from a work on the Seri Indians living on an island in the gulf of California!" Why the exclamation? That implies a mistake on my part. Does Mr Bushnell object to quotations from Professor McGee's comprehensive work? Or, does he mean that the Seri Indians do not live on an island in the gulf of California?

Harvard University has just published the results of more than twenty years exploration on the part of Mr Ernest Volk in the Delaware valley. It is one of the most important publications dealing with that mooted subject, "man of the glacial period." I referred to Mr Volk as a real archeologist, and he is such. Mr Bushnell places quotation marks

around the words "real archeologists," thus casting a slight on the long and honest labors of a most worthy man. Mr Volk has for twenty years faithfully and conscientiously explored one site until he not only knows that site but is able to speak with authority concerning it. I can find no researches of Mr Bushnell's that will compare in importance with the work done by Mr Volk.

The last paragraph of Mr Bushnell's review states that the text seems to have been prepared to suit the illustrations. This statement is not only unjust but untrue. A number of persons, knowing that I was publishing *The Stone Age* at a financial loss, made illustrations for me, and some figures were selected from the Government's and Mr Moore's reports, and two or three other sources. Many museum reports are made possible through the generosity of patrons. It is considered entirely proper for persons of means to aid authors or institutions in such manner. In view of such a prevalent custom, the singling of my work out for attack on this score is quite remarkable.

In a pioneer work it is natural that some errors will creep in. Particularly is this true of a work which departs from the established order of things and does not attempt to explain the wonderful art of the past by a study of the degenerate art of the present. There are some statements in *The Stone Age* which may be changed by future archeologists. There are also many observations which the school Mr Bushnell represents will regard askance, because that school sees nothing beyond the culture of historic Indians in America. I feel confident that for the most part the statements and observations offered in *The Stone Age* will stand, for the very good reason that they are based on a study of implements and types. *The Stone Age* is the result of twenty-five years study of the kind of artifacts illustrated in its pages. I am quite willing to leave the fate of the work in the hands of future archeologists, who will regard these various cultures in their true light. If Mr Bushnell would take the trouble to examine prehistoric sites and collections, he might realize the fact that there is a difference between past and present arts among our aborigines.

WARREN K. MOOREHEAD.

Anthropological Work under the Canadian Government.—On the opposite page is a view of the Victoria Memorial Museum, the national museum of Canada and headquarters of the anthropological work recently entered upon so vigorously by the Canadian Government in connection with its Geological Survey. During last summer the Anthro-

pological Division prosecuted several lines of field work. Dr Cyrus MacMillan of McGill University made a prolonged and careful study



The Victoria Memorial Museum, the national museum of Canada, Ottawa.

of the Micmac Indians of Nova Scotia, Cape Breton Island, and Prince Edward Island. The material obtained consists largely of

folk lore, but attention was also paid to many other aspects of Micmac ethnology, including their religion, social organization, and manufactures. Mr W. H. Meehling has been making a similar study of the Malecite Indians in New Brunswick and Quebec, some attention being also paid to music and language. Dr A. A. Goldenweiser of Columbia University has made a particularly intensive study of the social organization of the Iroquois Indians of Grand River Reserve, special attention being paid to the clan system, naming, and related topics. This is intended to be but the first step of a thorough study of Iroquois culture under the auspices of the Survey. Mr C. M. Barbeau continued his Huron-Wyandot researches in the neighborhood of Amherstburg, Ontario, and obtained much new material of value. He is now following up this work among the Wyandot of Quapaw Agency, Oklahoma. Dr Edward Sapir spent about a month in a rapid reconnaissance of several eastern Canadian reserves, including Grand River, Caughnawaga, Pierreville, Cacouna, and Pointe Bleue on Lac St. Jean, the main objects of the trip being to procure new material for the museum and to get a preliminary insight into various Iroquois and Algonkin dialects. Museum material has also been secured in connection with the other field trips referred to. As the ethnology of eastern Canada has been comparatively neglected by students, the Survey is making a special point of rescuing what is still to be learned from the Indian tribes of eastern Ontario, Quebec, and the Maritime Provinces.

The Museum of Anthropology of the University of California, comprising the great Hearst collections in archeology and ethnology, was opened for public exhibition October 4, 1911, in its temporary quarters at the Affiliated Colleges in San Francisco, with a reception tendered by Mrs Phoebe A. Hearst and the regents of the University of 400 guests.

During the past year Mrs Hearst provided for placing the greater portion of the collections under glass, to assure their protection and make possible their public exhibition. The museum is now open to visitors daily throughout the year, excepting Mondays, but including all Sundays and holidays, from 10 A. M. to 4 P. M. The exhibits displayed consist of: Ethnology of the California Indians; Archeology of Peru; Archeology of Greece and Italy; Archeology of Egypt; and a Revolving Exhibit. This last is changed periodically at intervals of about two months, a new unit collection illustrating some definite point in the history of man, or showing some new accession, being installed each time. In addition, exhibits of the ethnology of the Indians of the North Pacific Coast, and of the Southwest, are in course of preparation.

A part of the Peruvian and Egyptian collections, all the abundant series of specimens illustrating the archeology of California, and the material from the Plains Indians, the Pacific Islanders, the Philippines, and other regions, must remain, for the present at least, in storage, awaiting either the larger, permanent building that will ultimately be the home of the collections, or a more extensive equipment than is now available.

Mrs Hearst's gifts to the museum and the researches carried on in connection with its work have approximated a million dollars, making the largest single contribution to the furtherance of anthropology ever made in America and perhaps in the world. The present value of the collections may be estimated to be several times their original cost. A number of other patrons who have supplemented Mrs Hearst's efforts have helped to round out the collections and bring them up to a total of 70,000 well coordinated specimens.

MR F. W. HODGE, Ethnologist-in-charge of the Bureau of American Ethnology of the Smithsonian Institution, returned to Washington in October from an expedition to New Mexico, conducted under the joint auspices of the Bureau and the School of American Archæology at Santa Fé. Early in September Mr Hodge proceeded to El Morro, or Inscription Rock, in western New Mexico, where, with the assistance of Mr Jesse L. Nusbaum, of the School of American Archæology, paper impressions and photographs of the inscriptions on the rock were made. Mr Hodge later joined Dr Edgar L. Hewett, Director of the School of American Archæology, on an expedition to the Jemez Valley, about sixty-five miles northwest of Albuquerque, where excavations were conducted in the ruins of a large stone pueblo known as Amoxiumqua, which measures about 1,100 feet by 600 feet, and is situated on a mesa rising 1,800 feet above Jemez River. The results of these excavations were very productive and substantiate certain definite traditional and historical testimony respecting the former occupancy of this village by the Jemez tribe. ¹

THE 455th regular meeting of the Anthropological Society of Washington was held in the new National Museum building, on Tuesday afternoon, October 24, 1911. The following program was presented: "Exhibition and Description of Some Impressions of Spanish Inscriptions of the Seventeenth and Eighteenth Centuries, in New Mexico," by Mr F. W. Hodge; "Indian Survivals in the Carolinas," by Mr James Mooney; and "Some Archeological Problems of the Winnebago Indians," by Dr Paul Radin. At the 456th regular meeting, November 14, 1911, Dr W J McGee made an address on "Conditions Limiting Growth of Population in the United States."

DR HUTTON WEBSTER, Professor of Social Anthropology in the University of Nebraska, was the delegate of the American Association for the Advancement of Science to the First Universal Races Congress, held in London, July, 1911. At the Portsmouth meeting of the British Association for the Advancement of Science, Professor Webster read a paper on "The Origin of Rest Days," and a second paper on "The Relations between Totemic Classes and Secret Societies."

MR HARLAN I. SMITH delivered the first of the season's course of lectures of the Montreal Branch of the Archæological Institute of America, on Oct. 11, 1911, in the Chemistry Building of McGill University, Montreal, Canada. The subject of his lecture, which was illustrated with lantern slides, was "The Archæology of Western Canada."

WITH the beginning of the year 1912, *The Journal of Religious Psychology and Education*, published at Clark University, will become the *Journal of Religious Psychology, Including its Anthropological and Sociological Aspects*, under the editorship of President G. Stanley Hall and Professor Alexander F. Chamberlain.

IN response to the appeal to raise the sum of £15,000 as a building fund for the Galton Laboratory for National Eugenics at the University of London, sums amounting to a total of £2,260 have been given, promised, or promised conditionally on the buildings being begun within two years.

ON November 10, 1911, Mr Harlan I. Smith of the Victoria Memorial Museum, of Ottawa, Canada, gave the first in a series of free lectures initiated by him, his subject being "The Educational Work of a Great Museum."

THE fellowship of the International School of American Archeology and Ethnology at Mexico City, has been awarded by Harvard University to George Plummer Howe, A.B. 1900, M.D. 1910, of Lawrence, Mass.

THE annual Huxley memorial lecture of the Royal Anthropological Institute was delivered on November 23 by Professor F. von Luschan, whose address was on "The Early Inhabitants of Western Asia."

PROFESSOR FLORENTINO AMEGHINO, the well-known paleontologist and director of the Museo Nacional in Buenos Aires, died on August 6 at La Plata, at the age of fifty-six years.

DR ALEXANDER F. CHAMBERLAIN, hitherto Assistant Professor at Clark University, Worcester, Mass., has been appointed full Professor of Anthropology in that institution.

American Anthropologist

NEW SERIES

VOL. 13

OCTOBER-DECEMBER, 1911

No. 4

THE GENESIS OF THE MAYA ARCH

By EDWARD H. THOMPSON

UNTIL now, it has been the generally accepted belief among archeologists that the entire plan of the ancient stone structures of Yucatan was developed elsewhere, that in some unknown region the evolution of this structural type had been carried out until perfected, crystallized as it were, before the first stone structure was built on the peninsula of Yucatan. I find no evidence to maintain this belief, while I do find much, and, to me, conclusive evidence of a very typical process of development from the *ná* or the native palm-thatched hut of Yucatan, to the magnificent structures of stone and lime that crowned the terraced levels in these ancient centers of population on the peninsula. I regard, not the stone structures, but the little known and still less studied *ná* as the primitive, the unchanged and unchanging type structure. As it is today so it was in all essentials before the stones were quarried, the lime burned, or the flints chipped, that helped to make the first stone structure on the peninsula of Yucatan. I claim that the *ná* is the germ unit of the edifice chambers, and the edifice simply a collection of *nás* expressed in stone and mortar. While my examples are specific, the claim covers and the facts hold good generally all over the Maya area. Wherever this race of ancient builders, now called the Mayas, held sway, there the *ná* with its environmental changes became the type unit. I shall seek to prove these basic facts with few words but many examples.

Commencing, as we logically must, at the very foundations, I

will say that the seemingly general impression that all the stone structures in Yucatan are built on pyramids is as wrong as is, to me, the belief in the necessarily exotic origin of these ancient centers. Only the religious structures, temples, shrines, or altars, were so placed. The public buildings, palaces, and other structures of the kind were usually built upon terraces, higher or lower probably, according to the power and desires of their builders. Any person living today in Yucatan, who is building a home, will, if common sense governs and his means permit, place his edifice upon what is practically a terraced foundation, as did those ancient builders. The difference that even a few feet of elevation makes in this land of general level, is but little short of marvellous. It makes all the difference between constant smarting in a candent heat and a cool fresh atmosphere conducive to comfort and calm repose.

Slave owners can command and unpaid labor can be made to produce conditions looking to the superlative in comfort and luxury. Hence these high-terraced structural levels. There is no hidden mystery and no exotic origin, but a successful effort of a slave-holding people to be as comfortable as they could be regardless of cost, life or labor cost. This is but common sense applied on a slave-owning basis.

That the temples *are* built on high pyramids does not affect this question; all religions seek to give that which is best to their deities. If mortal man can secure reposeful comfort by the elevation of a few feet above the general level of the earth around him, then the mansions of the Deity must be placed as far above those of mortal man as He Himself is above mere manhood. That is the applied theo-logic of all times. It was applied in the shape of high truncated pyramidal sub-structures on the peninsula of Yucatan. To this may be coupled the ever pervading idea that God is to be worshiped on high places. There is no deep mystery and necessarily exotic origin in these ideas either, for they are world wide, soul deep, and all time long in human kind.

The base, the sub-structure, as a part of the entire plan, being now removed as a factor of the problem, I will seek to prove my assertion that the stone edifice is but the development of the palm-thatched ná.

My investigations have filled me with a respectful admiration of the ná as a habitation. The typical palm-thatched ná is as near the perfected structure of its class as a structural formation can be, it is like a natural growth, a thing built of the elementary particles of the region, and is itself a part of the environment, like the knots of the tree, the nest of the squirrel, or that of the humming bird. One may pass close by it in the forest, and yet it will still be hidden, merged in the surroundings. On the edge of the grassy savannah it is confounded with the thorny foliage caps and the low tree tops. It is perfectly ventilated, the vitiated air escaping and the fresh air entering by percolation and not by draughts. It is cool in the hot weather and warm in the cool season; no rains, however prolonged or heavy, can enter the roof of a well made ná, while the smoke of the *koben* or three-stoned fireplace, rising up to, and percolating through the thatch, keeps out the noxious insects and other vermin.

Like many other apparently elemental creations, the ná is really complex, being itself the slow and gradual development of unnumbered centuries; in fact the development of the perfected ná from the mere leaf shelter through its various stages is a fascinating study in structural evolution, which I shall undertake later, but it is not germane to the present article, which must commence with the perfected ná and end with the perfected edifice of stone.

Although the perfect ná is really the product of long-continued development, I think that in my researches in the Labná group of ruins I have proved conclusively that the palm-thatched huts, the ná's of then and now, have undergone no change in type form. We will therefore describe the building and give the measurements of the type ná. We will then take these type forms of thatched ná and stone edifice and compare them, first in detail, the thatched ná with the single chamber of the edifice, and then the edifice as a collection of units, chambers or ná's as they may be.

The village of Pisté is the native pueblo nearest to the ruined group of Chichen Itzá. I selected a ná in Pisté, built by pure-blooded natives, who, having never journeyed far from the pueblo, could not have had their building ideas changed from the general usages of the region and their people. All of the data, measurements, and so forth concerning these primitive ná types will be

understood as having been taken from the Pisté structure, unless otherwise stated.

In the famous ruined group of Chichen Itzá, by far the most important and typical of all the ancient groups of the peninsula, there is an edifice called by the natives *Ah-kat-tzib*, "the house of the writing in the dark,"—*ak-kab* writing, *tzib* darkness (pl. xxx)—so called from the fact that in the darkness of an inner chamber is a stone lintel, on the under side of which are lines of inscriptions and a seated figure seemingly in the act of offering burnt sacrifices. This edifice, though large, has no special points of interest, other than those of the above mentioned lintel. It is merely a very average example of these ancient structures, and as such I chose it. It has neither the high-ceiled chambers of the "House of the Governor" at Uxmal nor, on the other hand, the tiny ones of



FIG. 61.—The Maya ná : The ocomes or forked posts.

the "El Meco" type. All of the chambers are average in dimensions as in other particulars. Of these I selected the southwest corner chamber, as in several ways a typical one and so best suited to my purpose. All my figures and facts concerning the chambers of a stone edifice are taken from this one chamber, unless otherwise specified.

In the building of the ná the size is first to be determined, and this is fixed, not by the ground plan, but by the length of the *hol-ná* or ridge-pole (*hol* head and *ná* house, that is house-head). This determined and the site selected, all else falls into the grooves worn smooth for them by the attrition of ages.

Six or eight large *ocomes* or forked posts are firmly fixed in the

ground in their proper places (fig. 61). This is a work of much importance, for upon these ocomes rest the well-being of the structure, literally as well as figuratively. These must be perfectly aligned, adjusted to each other, and above all firm, if the ná itself is to be sound and true. The wall structure is after all a mere screen, a light filter or wind break, necessary in a way but not all important; so reasons the ná builder, and he acts accordingly.

With the ocomes rightly in place and firmly fixed, then come the *balós*, the first and the thickest of the important cross-pieces, the *pach-ná* house-back (from *pach* the back of, and *ná* the house), so called from the fact that it supports practically all of the thatched roof, and it will be remembered that the roof *is* the ná. The *pach-ná* must be long and straight to fit snugly, and be bound tightly to both *balós* and ocomes by the rattan-like vines of the *anicarp* or *bejuco*

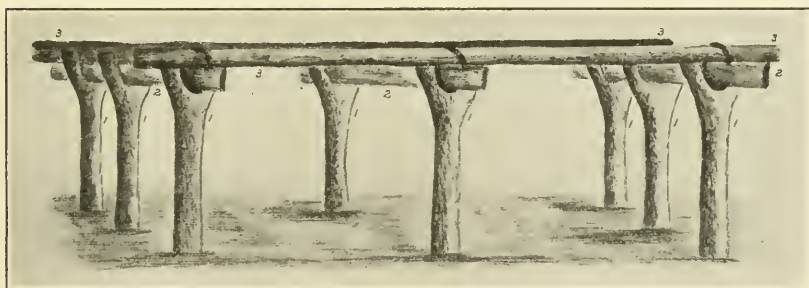


FIG. 62.—The Maya ná : 1, the ocomes or forked uprights ; 2, the *balós* or first cross-pieces ; 3, the *pach-ná* or first stringers.

(fig. 62). After the *pach-ná* come the *tijeras* and the *hol-ná* or house-head (*hol* head, and *ná* house), in other words the ridge-pole; these two, the *tijeras* and the *hol-ná*, together define the form of the roof. Note this fact for later it becomes of importance (fig. 63).

Before the *tijeras* can bear the weight of the *hol-ná*, the ridge-pole, or even prudently be allowed to sustain themselves, they must be braced and strengthened by the important second cross-piece, the *cap-aac* or turtle's arm (*cap* arm and *aac* turtle). Without this cross-piece and the thick first cross-piece, the *baló*, the entire roof structure would be liable to collapse, as a house of cards. Make special note of this fact, because of its latent importance.

After the *cap-aac* comes the *bel-chó* or way of the rats (*bel* way and *chó* rats), and well named it is, although we would know it better as the second roof-stringer.

The *xol-much* the toad's crutch (*xol* crutch and *much* toad), the diagonal roof braces that serve to stiffen the structure length-wise, are firmly bound in place, and then come the *uinkin-chés* or man-poles. These are long, semi-flexible poles channelled at the extremities and bound, both to the *hol-ná* or ridge-pole, and to the *bel-chó*, and the *pach-ná* or stringer. They thus form the foundation upon which the palm-thatch rests, and for this they are called the

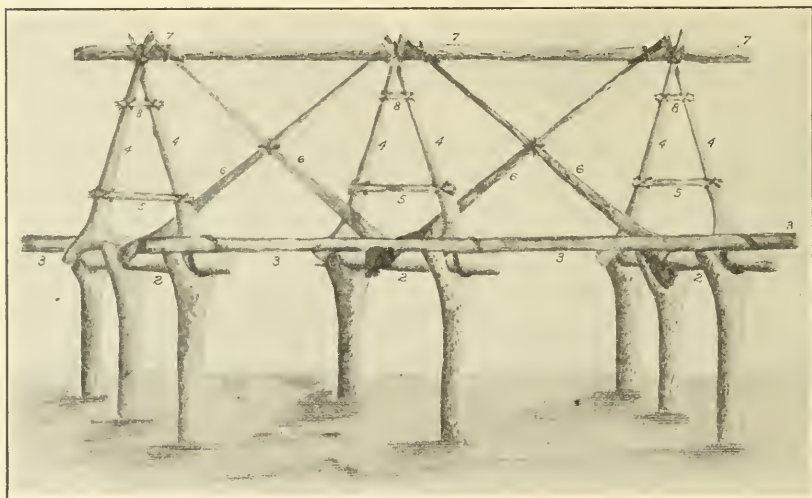


FIG. 63.—The Maya ná : The eight upright supporting posts are the ocomes ; 2, the balós ; 3, the pach-ná ; 4, the tijeras ; 5, the cap-aac ; 6, the xol-much ; 7, the hol-ná ; 8, the chan-cap-aac.

uinkin-chés, the euphonic transposition of the word *uinic* man and the word *ché* pole, man-pole.

Upon the man-poles, at right angles to them, are laid long, slender saplings, separated by a space of about a foot. These rods, or *jiles* (pronounced *heeles*) (fig. 64), must also be bound tightly and with special care, for if they become loose the thatch will be liable to leak, and ruin comes quickly upon a leaky thatch. The thongs that bind the *jiles* to the *uinkin-chés* are not the *bejucos* or vines of

the *anikab* but the fire-seared leaves of the *chelem* and the *cahum*, wild agaves. These leaves, seared and divided into long stringy green thongs, are as supple as wet cow-hide, and as strong as so many hide lacings. Anything bound by them, and these natives know well how to bind, become, when these thongs dry, about as firmly bound as anything can be, without solder or welding. In fact the finished frame of a well built ná is so taut and firm that it almost hums like a drum when struck with the open palm of the hand.

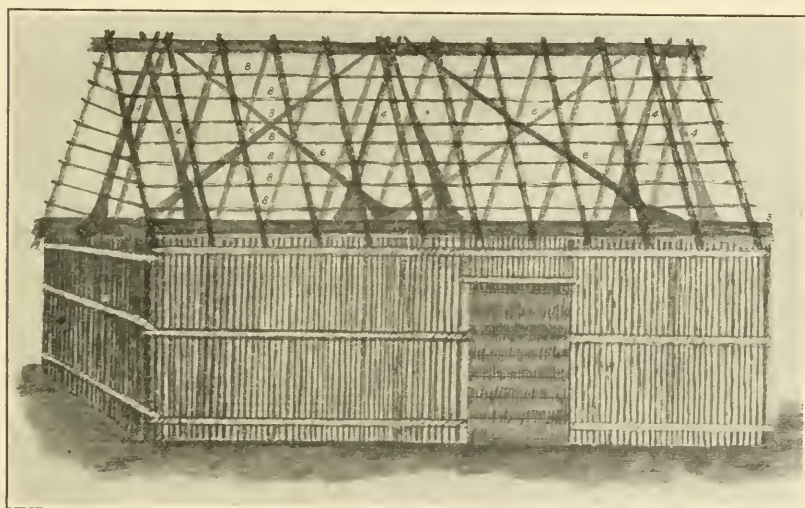


FIG. 64.—The Maya ná ; 3, the pach-ná, stringers ; 4, the tijeras ; 6, the xol-much or diagonal braces ; 8, the jiles.

The leaves for thatching the house before it can be called a finished ná have been cut from the tree some time before and have been dried in the sun until the chlorophyll-green of the mature leaf has changed to the light straw-color of the perfectly dried one. These leaves are the large palmates of the *Sabal Mexicana*, called by the natives *xan* (pronounced *shan*). When dried they are bound in bundles and stowed away in dry places, until used. The leaf in the bundle is left as it comes from the tree, cut from its long stem with only about six inches of it left as a kind of handle (fig. 65). When made ready for the thatch, the leaf is so trimmed that only the

portion remains represented in figure 66 by the full lines, the dotted portion representing the parts removed. The palm-leaf or *huano*, as it is called, is then divided into three parts by twisting the two outer portions until they take the form shown in figure 67. These parted leaves are placed on the jiles as there shown and as in figure 68. They are firmly held in place by the pressure of the one against the other, each being "skewered" upon the jile. The huanos upon one jile well overlap those directly below, like the shingles upon a roof, and they all together form the water-proof thatch of the ná.



FIG. 65.

There still remains one very important portion of the thatching of the ná, and that is the placing of the *pac-hol-ná* (the cap of the house-head). This is the palm-leaf covering over the hol-ná bound down by the *kat-ché* and *hol-ché*, pole binders. The *kat-ché* are the two short binders and the *hol-ché*, or head-poles, are the long ones. In figure 69 is shown the cap-like covering of palm-thatch, the *pac-hol-ná*, held in place by the *kat-ché* and the *hol-ché*.



FIG. 66.

The floor of the type ná is raised about a foot above the general outside level, and is upheld by the *pak* or rim composed of *kan-kab*, mud and stone puddling, faced with mortar of white earth, *sahcab*, and lime. This floor, I am sorry to have to say, was of red earth only, stamped hard, but in many other ná's that I have known the floor has been made of a mixture of three parts finely sifted white earth to one part of lime, and both well mixed with water, in which strips of *chucum* bark have been soaked. This *chucum* bark is very rich in tannin and the mixture, spread in layers on the floor surface, well pounded down, and burnished with smooth stones, *kas*, by strong and practised arms, gives a cream-colored floor-surface with a slight pinkish tint, as hard and as serviceable as can be desired.



FIG. 67.



FIG. 68.

The ná has neither doors nor windows as we understand them.

A screen of vines interlaced around, and stiffened by, a woof of slender poles, and held in place by loops of the same kind of vine passing through the edge of the screen and interstices in the entrance posts, serves all their needs, and admirably so. During all of my long experience among these people, I can not recall a single instance where these primitive door-screens have been wilfully, or rather criminally, violated.

The outer wall-spaces between the front and the rear entrances are filled up with small, straight poles, placed upright close together, and firmly bound with stout, thick bands of twisted and interlacing vines. These bands are three in number always, and divide the wall-space into two zones. Sometimes the wall surface thus made

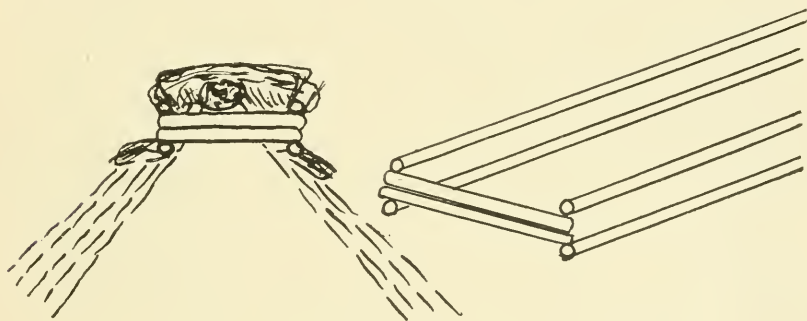


FIG. 69.

is left so, at other times it is covered with a mortar made of red earth, *kankab*, chopped grass, *chac-suc*, and *ha*, water, well kneaded together into a tenacious, plastic mass, that, when worked by practised hands into and between the pole surfaces, will, like adobe, resist even the tropical rains of the region.

The zone of wall surface directly beneath the overhang of the thatch is the place where the people of the ná suspend certain valued articles or things that can not for various reasons be kept indoors. Being under the overhang of the thatch they are generally dry and at the same time are high enough above the ground to be beyond the reach of predatory animals. It is on this zone that the trophies of the hunt are generally placed and exposed for drying, the skin of a jaguar or that of a python, the tail-fan of a golden turkey, or

the carapace of an armadillo. I call this the "trophy zone" of the ná.

The type ná is thirty feet long by fourteen feet and six inches wide, and nineteen feet high. From the floor to the pach-ná, house-back, corresponding to the spring of the arch, is ten feet, and from the pach-ná to the hol-ná, house-head, that is, from the spring of the arch to the apex of the roof, eight feet and six inches. The height of the first baló cross-piece from the floor is seven feet six inches. This baló being the most important of the cross-pieces is therefore the thickest, being over six inches in diameter. The second cross-piece, the cap-aac, is nine feet four inches from the floor, and is only four inches thick, while the chan-cap-aac at a height of eighteen feet and six inches from the floor is only three inches in diameter. These cross-beams are of the most vital importance to the safety of the ná. Without them the thatched roof is liable to collapse under an added burden, as for instance the moisture weight after a heavy rain. The material of these cross-pieces and that of the rattan-like *bejucos* that bind them to the roof-frame are matters of much moment to the careful builder of ná. I particularly wish to impress upon the mind the importance of these cross-pieces. The reason of this will appear later.

Measurements taken by me from over a hundred ná. develop the following building rules, probably established through untold generations of practical experience. The width is half, and the height two-thirds of the length, the height of the wall from the floor to the spring of the arch is equal to that from the spring of the arch to the apex of the roof.

These rules are not adhered to by inches or the fraction of an inch. That they are adhered to as closely as they are, without the use of graduated rule or measure, is surprising, and only to be accounted for by the fact of an instinctive adherence to lines, even though fixed by the eye alone, that the accumulated experience of untold centuries has told them is the best adapted for their purpose, that of habitation and durability.

The floor of the ná if properly made is raised fully a foot above the immediately surrounding surface. That this is the rule and the intention of the fully developed ná is proved by the raised *pak*

or surrounding base line. That these rules are not always adhered to is owing to the personal equation, the same reason why one person is "well groomed," buttoned up, and trim, while another is carelessly dressed, has buttons off, and is slouching or slatternly, There is character in a ná as in a mansion or in a person.

We have now studied the ná, dissected its parts, learned their purposes, and have re-assembled them into the perfect ná (fig. 70).

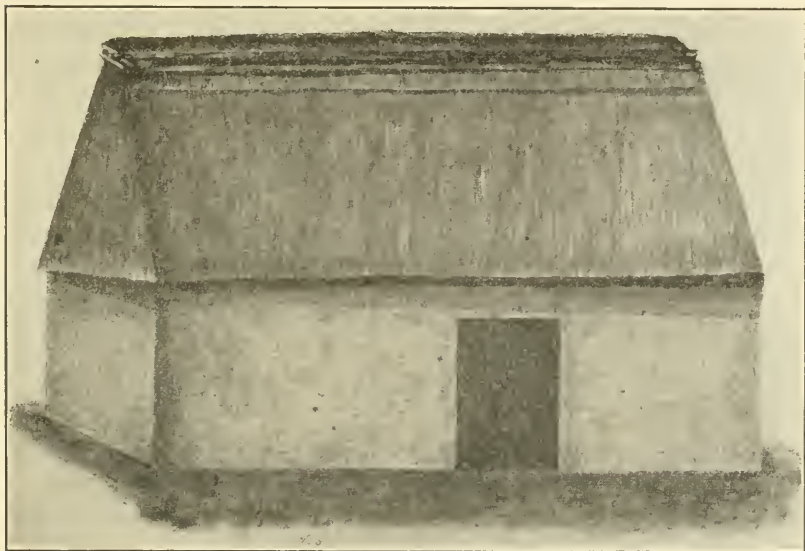


FIG. 70.—The completed ná.

We will now attempt the same so far as we may, first with the chamber and then with the edifice.

Like that of the ná, the chamber floor and that of the edifice as well is raised fully a foot above the former outside level. I say former outside level, because the accumulation and debris that together form the present surface must of course be discarded. To be exact the height of the stone outset of the chamber corresponding to the pak of the ná is exactly sixteen inches. In the different edifices of Chichen Itzá as well as those in the different groups of the peninsula, the height of this outset of stone changes but in degree only. It is always present and is the development in stone of the pak of the ná.

The floor of the chamber is made of the same material combined in the same mortar rate and in practically the same way as the better class of floors in the *nás* of today, as already described. Of course it can not be said and proved that even the *chucum* water was used but the evidence is plain as to the mortar rate and the use of the *kas* or smooth stones for burnishing.

At this point it may not be amiss to state that, as the masons

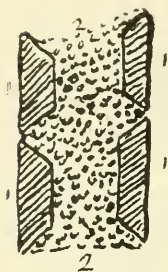


FIG. 71.

of those days worked and made their walls of stone and mortar, so do the native masons of today. They use the same mortar rate, the same curious methods of imbedding wedge-like stone chips to stiffen the plastic mortar mass, and probably the same method of transporting stones, by balancing them on their heads, rather than by employing hods or rope lifts. The walls were built up probably by placing the cut stones first, and then making the mass solid by a rubble and mortar

mixture, a mortar grouting. Into this were then placed the wedge-shaped stone chips, and in time the whole mass became almost homogeneous (see fig. 71).

As in the case of the present *nás* the edifice chambers seem to have had neither doors nor windows as we understand them. The curious little orifices in the stones at the entrances, worn smooth by attrition, indicate that curtains and interlaced wythe screens took the place of the doors. Light was probably admitted through these entrances, or was obtained by the use of the wild wax tapers that these ancient people were expert in making.

Ventilation in the southwest chamber was secured by horizontal ventilating shafts piercing the wall from face to face close to the spring of the arch. The shaft was too high up and too small to serve in the matter of lighting, but did serve perfectly well as a ventilator. It must be remembered that in the tropics the great problem is, not so much how to bring the light and heat in, as how to keep it out, or at least to tone it down.

At the height of eight feet the spring of the arch commences, with an outset of three inches, as shown in figure 72. The angle of wall inclination is about twenty-five degrees, and at a

height of thirteen feet seven inches occurs the second jut or outset. The space between the inclined walls, or where would ordinarily be the apex, is truncated and in its place is a flat stone slab (fig. 73). This form is what is known as the "Maya arch."

At the respective heights of seven feet four inches, and eleven feet seven inches, there were inserted in the chamber walls four sets of cross-pieces corresponding, almost coinciding in position and size, with the cross-pieces of the ná, the balo, the cap-aac, and the chan-cap-aac so fully described before (fig. 74).

Now let us discuss the so-called Maya arch, and with it these cross-pieces, for both are intimately related. The Maya arch is an arch in name only, no key-stone is ever attempted, and the upper walls, though ever inclining inward, never meet. Their truncated planes are met and bound by flat stone slabs, and the weight of the mass above them.

Why should a people so intelligent as to evolve a calendar system but little short of marvellous in its accuracy have taken up and kept to an architectural plan so faulty in principle and cumbersome in practice? Simply for this reason: Evolution that had for a time held sway was later arrested, cut short by a period of conventionalism, evolution ceased, and the process of crystallization set in. The chamber was evolved from the ná and the edifice was but a collection, a grouping of the ná's when conventionalism gained the upper hand and development ceased.

The inner wall surface and lines of the chambers are but those of the inner wall surface and lines of the ná expressed in terms of stone and lime; the juttings and spaces on the wall and ceiling are but the expressions in stone of the lines of the pach-ná and those of the



FIG. 72.

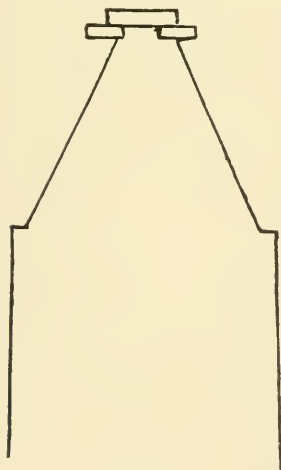


FIG. 73.

hol-che. Those weak-looking cross-pieces so anomalous in the massive chamber walls are but the atrophied and almost disappearing tokens of the cross-pieces that are so important in the frame work of the ná and so useless in the chamber. That they did not utterly disappear from the outline of the chamber is perhaps due to the fact that they *are* so all-important in the ná. This survival of a once important function or act is seen in the turning of the horse and the dog before lying down, or, to bring it down to the common events of our own time, in the dress coat with its peculiar shape, which has survived while the rapier that called for it has long disappeared from use. •

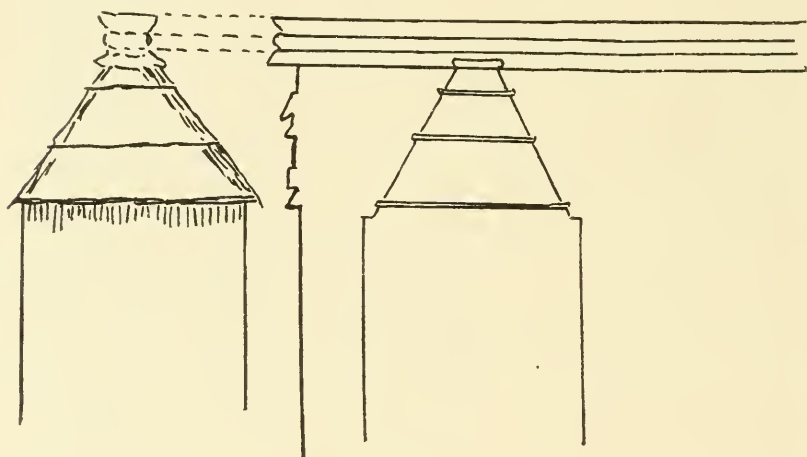


FIG. 74.

This in my opinion is the history and origin of the so-called Maya arch, a development from the ná cut short by conventionalism.

Now let us compare the outer walls of the chamber with those of the ná. The coincidence of the stone outset in the chamber wall with the pak of the ná has already been alluded to. By itself this coincidence means nothing, but, when combined with the other data, it means much. Like the walls of the ná those of the chamber and the edifice are divided into two broad zones. In the edifice of the Ah-kat-tzib, these zones are both plain, but this is unusual among the ancient structures of these groups, very rare indeed. As a rule the upper zone is devoted to symbolical designs, masks,

serpent-symbols, meanders, and the like. This is the zone that in the ná I have called the trophy zone, a zone of direct utility in the ná, of conventional symbolism and ornamentation in the edifice. A lower zone is sometimes plain as in the Ah-kat-tzib, or covered with columns and spindle designs as in the Palace of Labná. Do not these two surfaces recall, the one the adobe surface of the ná and the other the poles with the wythe bindings?

Now we have reached the roofing. The terminal stone courses, the cap stones of the edifice, are ever as shown in figure 75 and they extend around the entire roof structure of the edifice. Whatever else may be added or omitted, these are ever constant, practically the same. What are they but the lines of the collective pac-hol, house-head wall, hol-ná, and those of

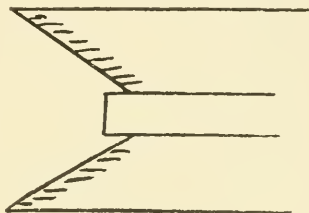


FIG. 75.

the binders, the kat-ché and hol-ché carried out and conventionalized in stone (fig. 76)? Although conventionalized it was in a marked degree an intelligent conventionalism that tried to get the best out of the material and within the limits given. These collectively applied lines of the pac-hol-ná were so combined as to hold and to serve their old purpose as roof binding and rain shields, and so to keep the waters of the roof as well from striking and defacing the symbols on the upper zone, as from what was in the ná, the trophy zone.

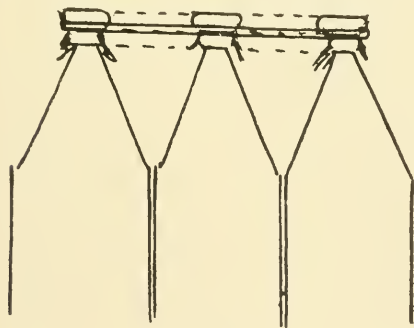


FIG. 76.

From these facts and data the safe conclusions to be drawn are these: The base lines, the ground measurements of the chambers and the edifice as well, are those

of the ná. The wall lines and measurements of the chamber are practically those of the ná. The shape, the inclinations, the general proportion of the chamber walls and roofing follow closely the

lines of the ná,—lines, angles, and measurements fixed and necessary to the ná, arbitrary and conventional to the chambers of the stone edifice. The so-called Maya arch is but the lines of the ná roof-structure expressed in stone and lime. The roofing of the edifice follows the lines and intent of the ancient pak-hol-ná expressed in conventional lines of stone.

In short the ancient stone edifices of Yucatan are arrested developments from the ná of the region. The features which they present were a typical, and, as far as it went, a perfect development from the type ná as it exists today, in the wilder portions of the peninsula, and bear no indication of exotic origin. Conventionalism held this race hard bound and conventionalism holds among the brown-skinned race today. "Who am I that I should do different from what my father did?" is a frequent expression on the tongue of the native Maya.

CAMBRIDGE, MASS.

SOME ASPECTS OF WINNEBAGO ARCHEOLOGY

By PAUL RADIN

THANKS to the activities of the Wisconsin Archaeological Society, an ever increasing mass of data relating to the antiquities of that state is now being collected. Much still remains to be done. It will, for instance, be impossible to correctly answer all the problems that have arisen from even a preliminary study of the data, until, on the one hand, a complete and thorough archeological survey of the entire state has been made coupled with a survey of the adjacent states and until, on the other hand, this data has been critically examined and interpreted by means of the ethnological facts at our disposal. Owing to the unfortunate lack of correlation between kindred sciences, due in part to the different historical developments of each subject archeology has too often been cultivated entirely apart from ethnology. This has, it is needless to say, given rise to a number of misconceptions and has, in addition, created a certain number of pseudo-problems. It is not with any desire of infringing upon the sacred rights of archeological research but from the simple desire of clarifying a condition of affairs that has at times threatened to nullify the results of both ethnological and archeological investigations, that it seems justifiable to state categorically that in very few cases has much good come from haphazard archeological investigations, begun without direct reference to problems suggested by ethnology. Archeology is necessarily but one phase of ethnology and if, owing to the richness of the material, it seems expedient to treat it as a separate science, the intimate relation it bears to the latter should never for a moment be forgotten. It is of the greatest importance, then, that the rôle of ethnology, in the consideration of archeological investigations, should always be borne in mind, and it is in connection with a cultural area where the evil results of a one-sided archeological study have been painfully apparent, that the following paper was written.

In Wisconsin, of all areas within the United States, the most fantastic theories have been developed to account for certain peculiar, archeological features that upon inquiry have been explained in a very simple manner indeed and in which, as a matter of fact, the peculiar features turn out to be "archeological" only by sufferance. We do not in the least wish to disparage the careful work done by numerous investigators in Wisconsin and elsewhere, but we do wish to bring home to them how much better would their object have been accomplished, had they tempered their antiquarian enthusiasm with an attempt at realizing what ethnological information was requisite for a correct understanding of the problems with which they were confronted. As a matter of fact, when everything else had failed, a chance bit of information obtained by Dr Stout of the University of Wisconsin explained that one feature for which Wisconsin was renowned, namely, the effigy mounds.

We said before that much was still necessary before all the problems of Wisconsin archeology could be elucidated, but enough is known to justify a study of the general data at our disposal in its relation to the ethnology of the Winnebago—for it is to them that we wish to confine ourselves entirely—and from the point of view of a few of the more important archeological problems involved.

The large number of mounds covering Wisconsin was noticed many years ago. Many explanations were given but, as these were in almost all cases individual attempts to account for them in any manner that would satisfy the logical sense of the investigator, they need not detain us here. Of course, when the "mound-builder" theory was in the ascendancy, the mounds fitted in admirably with the general scheme of things, especially since the inhabitants of the area where they were found professed to have no knowledge of their meaning. But the one thing that always puzzled investigators was the peculiar nature of their distribution and their enormous number.

The first really serious study of them was made by I. A. Lapham in 1850, and his work is of considerable importance still by reason of the admirable plats of mounds long since levelled. The next

discussion is that to be found in Cyrus Thomas' "Report on the Mound Explorations,"¹ but he makes no attempt to explain them. Our first accurate knowledge dates from the inception of the *Wisconsin Archeologist* in 1901. Any attempt to study the archeology of Wisconsin will necessarily have to be based upon the material there published. An extremely useful and suggestive summary of the data has been made by A. B. Stout. This little pamphlet and that on the Koshkonong region² by the same author have served as the basis of this article, as far as the data on the mounds are concerned.

The nature and significance of the mounds offer perhaps the most interesting archeological problems of Wisconsin, but they are by no means the only ones nor will their solution alone furnish all the light necessary for forming an approximately accurate picture of "pre-historic" Wisconsin, if we may indeed regard them as prehistoric. We should still have to investigate the distribution of pottery,³ arrow-points, and copper. The impossibility of answering any of these questions, apart from their relation to the ethnology of the area, will become apparent after the ethnological data themselves have been discussed, and it seems best to formulate the archeological problems of the Winnebago in connection with this brief survey.

The Winnebago, when first found, were inhabiting the southern shore of Green Bay, Wisconsin. Whether, at this time, they already extended farther south and west it is impossible to say. The traditions speak only of Green Bay as their original habitat. On the other shore of Green Bay were the Menominee, who likewise have no recollection of ever having lived anywhere else. To the northeast, along Door peninsula, were the Potawatomi, unquestionably intruders, who had come by way of Mackinaw. To the southwest lay the Sauk and Fox, the closely related Kickapoo, and the enigmatic Mascoutin. Finally, to the south lay the Miami.

¹ *Twelfth Ann. Rep. Bur. Amer. Ethnology*, pp. 47-99.

² "Prehistoric Earthworks in Wisconsin," *Ohio Archeological and Historical Quarterly*, Jan., 1911; and "The Archaeology of the Lake Koshkonong Region," *Wisconsin Archeologist*, vol. 7, no. 2.

³ Pottery will not be discussed in this article owing to the scanty comparative data from the Menominee, Potawatomi, and Sauk and Fox.

This seems to have been the distribution of the tribes around Green Bay and Lake Michigan at the first advent of the whites. Within fifty years of the landing of Nicollet the places are entirely shifted. Winnebago villages are found scattered all along the Fox River and Lake Winnebago, the Sauk, Fox, and Kickapoo are on their way farther south and the Potawatomi are in possession of the southern shore of Green Bay and the western shore of Lake Michigan. Later still we find the Winnebago extending all along the Wisconsin River and west of it to the Mississippi and, at the same time, occupying the territory south of Lake Winnebago through the region of the Four Lakes, the shores of Lake Koshkonong and farther down along the Rock River into Illinois. Their eastern boundary was determined by the Potawatomi.

This being the distribution of the tribes with whom we are principally concerned, let us now look into the distribution of the mounds and archeological relics. Of the three kinds of mounds found in Wisconsin the conical and oval ones are the commonest and they are met with in practically every county of the state, in which records have been made. They have, in addition, been found in Minnesota. The so-called effigy mounds, on the other hand, have never been found north of a line running through the southern boundary of Lincoln County. They have, however, been found in every area which the Winnebago occupied at one time or another, with the exception of the eastern shore of Green Bay and the Fox River. At the same time they have been discovered in large numbers in the counties of Sheboygan, Ozaukee, Washington, Waukesha, Racine, and Kenosha which, as far as our historical information is concerned, had never been occupied by the Winnebago. Flint arrow-points and pottery shards are found throughout the entire state. The distribution of copper implements has not been thoroughly investigated as yet, although the present status of our knowledge has been ably discussed by C. Brown.¹ To judge from the papers of Brown, implements of copper are found pretty generally distributed over the state, although certain objects seem to be found in greater abundance in some places than in others.

¹ "The Native Copper Implements of Wisconsin," in *Wisconsin Archeologist*, vol. 3, no. 2; and "The Native Copper Ornaments of Wisconsin," *ibid.*, vol. 3, no. 3.

Summing up then, we can say that the distribution of flint arrow-points, pottery shards, and copper implements indicates that all the tribes of Wisconsin possessed these objects; that the distribution of the mounds, however, suggests that the erection of mounds belonged to a number of tribes of this area but by no means to all the inhabitants of Wisconsin; and that, finally, the more or less limited area in which effigy mounds are found suggests the possibility of attributing them to one, at best to a limited number, of tribes. Wisconsin archeologists have, indeed, insisted repeatedly that the effigy mounds are the work of the Winnebago alone but as a matter of fact they have never proved it. Ethnologically we shall see that this can be demonstrated beyond any doubt.

It seems to us essential, owing to repeated shifting in the positions of the tribes of Wisconsin, to summarize what we know of those tribes of whose intrusion we have undoubted proof. This will entail the discussion of the Sauk and Fox, the Potawatomi, the Miami, and the Ojibwa. Our knowledge of the historical migrations of all of these tribes is fair, so that we are in a position to compare some of the archeological characteristics of their former habitat or habitats with those found in Wisconsin. If it will be possible to exclude these Algonkin tribes from any authorship in the mounds, much will be gained. In the same way we may point out the relation of these tribes to the other archeological features of Wisconsin.

The Algonkin tribes mentioned above have all been repeatedly questioned about the authorship of mounds found in territories inhabited by them at one time or another, and they have all professed entire ignorance, nor has it ever been possible to obtain any information that would suggest whether their ancestors knew anything about these earthworks. These statements alone could hardly be regarded as convincing, for it is by no means certain that the questions were always framed in the proper manner, and then again it is possible that these Algonkin tribes have forgotten about them. However, this statement, taken together with the fact that over the vast area covered by Central Algonkin tribes in Canada very few traces of mounds have been found, justifies the inference that in their original habitat, at least, these tribes

did not build mounds. The next question that presents itself is, whether they did not develop that tendency after their entry into Wisconsin? Let us confine ourselves for the present to the conical and oval mounds, because the effigy mounds, being confined to a restricted area, must be treated separately.

A large part of the territory in Wisconsin occupied by Algonkin tribes was before them held by the Dakota. It is, however, extremely doubtful whether all the territory on which mounds are found was formerly Siouan. Nevertheless it must be regarded as rather significant that by far the largest number of mounds are found in an area that was in former times undoubtedly Siouan and that one type of mound extends into Minnesota over an area at one time unquestionably Siouan. We may therefore say that a survey of the Algonkin area shows that the finding of mounds in regions where the Algonkin are intruders is always correlated with a former habitation of the Siouan people. We may consequently infer that some Siouan tribe or tribes were the authors of the mounds, or that some of the Algonkin tribes erected them after their arrival in Wisconsin. In this case, provided the small number of mounds found north of Wausau is not due to insufficient surveys, it is probable that, if they are not of Siouan origin, they will have to be regarded either as a sporadic development or as a result of Siouan influence. Personally, we are of the opinion that the first alternative is the more acceptable.

Having thus eliminated the Algonkin tribes from any participation in the erection of the mounds, it is next in place to determine, if possible, what Siouan tribes can positively be associated with mound building activities, and, if it can then be established that the builders were all of one tribe, whether this activity was an old characteristic of that tribe that has since been abandoned or whether it has persisted into historical times, *i. e.*, until after the coming of the whites.

We have no evidence that any Siouan tribes ever inhabited Wisconsin except the Winnebago and Dakota. The members of the Cegiha group (Omaha, Ponca, Osage, Kansa, and Kwapa) as well as those of the Tciwere group (Oto, Iowa, and Missouri) have persistent legends to the effect that they formerly occupied land near

some large lake (presumably Lake Michigan) and that they were formerly a part of the Winnebago. Yet, when encountered by the first white travellers these tribes no longer inhabited Wisconsin. The language of the Tciwere, however, is so closely related to the Winnebago that there seems no doubt that their separation from the latter could not have occurred very long before the coming of the whites.¹ In addition to this, the social and ceremonial organizations of the two groups are markedly alike. Our question then is, did these two groups, the Cegiha and the Tciwere, or the Dakota, participate with the Winnebago in the building of the mounds? Upon interrogation, they declared that they knew only of conical mounds and that their knowledge of even these was vague. However, this testimony must not be accepted as conclusive, for no systematic interrogations have as yet been made. We might, however, approach the problem in a different manner and see whether the Dakota, Cegiha, or Tciwere built any mounds after they left their more eastern habitat.

According to Thomas,² elongate or, as they are now generally called, linear, as well as conical mounds, are found in all parts of what he calls "the Dakotan area," which embraces North Dakota, South Dakota, Minnesota, Wisconsin, the adjoining portions of Manitoba, the extreme northeastern corner of Iowa, and a narrow strip along the northern boundary of Illinois. According to him we have the following distribution of type I, the effigy mounds. "Starting on the shore of Lake Michigan a little south of the line between Wisconsin and Illinois, it runs westward to the vicinity of the Rock river, where it makes a sudden curve southward to include an extension down the valley of that river a short distance into Illinois. Bending northwest, it strikes the Mississippi very near the extreme southwest corner of Wisconsin. Passing a short distance into Iowa, it bends northward, including about two counties in this state and the extreme southeastern county of Minnesota. Thence, recrossing the Mississippi a little north of Lacrosse, it continues in a nearly direct line to the head of Green Bay; thence south along the shore of Lake Michigan to the starting point."

¹ The similarity extends not only to specific points in grammar but even to specific resemblances in vocabulary.

² *12th Ann. Rep. Bur. Amer. Ethn.*, 530-540.

Since Thomas' description the northern boundary has been extended to a line running through Eland Junction.

There is one significant thing about this distribution; it coincides absolutely with the various habitats of the Winnebago.

The distribution of the elongate mounds is broader than that of the effigy, including in addition to the above territory an area as far south as the latitude of Peoria, northward along the Souris River, and westward probably as far as the valley of the Yellowstone, *i. e.* practically over the entire extent of territory occupied by Siouan tribes.

The distribution of the conical mounds which must in general be regarded as burial mounds is coextensive with the Dakotan area of Thomas. We include in this class also the rows or lines of conical mounds, the so-called composite type.

As might have been expected, attempts were early made to see in the different types of mounds indications of different archeological ages. Even Thomas, who was generally very careful, believed that one may be justified in concluding "that there has been a gradual transition during the mound building age from one form to another and that, apparently, this change has been from the more complicated and massive to the simple, conical tumuli, ending with groups of this type, showing no decided tendency to any specific arrangement, as in this last type, we find evidences of the most recent construction."¹ If ever the danger of treating archeology apart from ethnology led to the most ludicrous assumption, it was in this case, as we shall subsequently see.

The foregoing survey must convince everyone that the linear and conical mounds, at least, were unquestionably constructed by the Winnebago and Dakotan tribes and that the participation of the Cegiha and Teiwere branches of the Siouan family is extremely doubtful, unless we assume that they lost this cultural characteristic as soon as they began migrating westward. Our survey must likewise be regarded as demonstrating clearly the fact that the effigy mounds were built by the Winnebago. For if they were

¹ Lapham, quoted by Thomas, has the following "ages": first and oldest, the animal forms and the great works of Aztalan; second, the conical mounds built for sepulchral purposes, which come down to a very recent period, etc.

built by any other tribe it would certainly be remarkable that this art should have been forgotten as soon as that tribe left Wisconsin.

Thus far we have been approaching the subject of mounds from the purely general archeological point of view. Let us now see what results we can obtain from the ethnological view-point.

No systematic inquiries were made among living Winnebago as to the possible significance of the various types of mounds until 1908. In obtaining notes on social organization the writer was told incidentally that it had been customary not very long ago to erect near the habitation of each clan an effigy of their clan animal. Subsequently, upon a more systematic inquiry, it was discovered that not only were such effigy mounds erected near clan habitations, but also on every plantation owned by a certain clan. In other words, these effigies were, to all intents and purposes, property marks. Similar effigies are found in porcupine-quill work, on the war bundles, and on the woven bags still used by the older Winnebago in Wisconsin. This interpretation has been so fully corroborated that there can be no possible doubt about it. The age of the mounds thus shrivels down considerably. Of course some may have been erected long ago, but it is quite evident that the effigy mounds found near the Mississippi, now since we have shown that only the Winnebago could have been their authors, must have been erected during the eighteenth century, as the Winnebago did not reach this region before that time.

In connection with the effigy mounds two things will have to be explained, namely why there are no mounds of this type near Red Banks, Green Bay, and why there are so many directly south of this region along the eastern shore of Lake Michigan, a territory in which the Winnebago have no recollection of ever having lived. The first question is very difficult to answer. There is still the possibility that some mounds may yet be discovered and again it is possible that all have been levelled. Considering the persistency with which they have held on to the custom of mound building during their forced migrations since the eighteenth century, even when they lived in places for only a short time, the absence of any mounds in their legendary place of origin suggests the

possibility that they never lived near Green Bay.¹ This inference has, indeed, been drawn, not, however, from a study of the archeological but from that of the historical sources, by Mr P. V. Lawson.² In this paper the writer tries to prove that all the old sources point to Doty Island, situated in Fox River, at the foot of Lake Winnebago, as the place where Nicollet first met the Winnebago. Whatever the merits of the case may be, it is certain that, according to the Winnebago themselves, their original home was Green Bay. Into this tradition, many legendary details have, of course, been woven and it seems to us that the presumption of evidence favors Green Bay, yet in spite of this fact the complete absence of what seems to have been such a characteristic feature of Winnebago culture as effigy mounds, does suggest a possibility that the Green Bay settlement represented just the northernmost point of extension of the tribe. The large settlements found along Lake Winnebago so soon after Nicollet's landing, make it reasonably certain that the Winnebago had been there before his arrival in Wisconsin.

We will also have to assume that the Winnebago erected the effigy mounds along the western shore of Lake Michigan, in an area that, since the coming of the whites, has been occupied successively by the Miami and Potawatomi. This would indicate that the Winnebago originally came, in a compact mass, from the South. They, however, have no recollection of this fact and it must indeed have taken place many centuries ago. This is, of course, only an hypothesis, but, as the exact landing place of Nicollet is open to some doubt, the archeological data, or rather absence of data, justifies a non-committal attitude.

In the above paragraph we have assumed that the effigy mounds along the western bank of Lake Michigan were the work of the Winnebago, as there seems to be no other reasonable explanation of them. If it were possible to interrogate the Miami on this point, much would certainly be gained.

¹ The absence of any mention of them in early records has no significance, for even late into the nineteenth century, in regions where it seems incredible that they could have escaped notice, no mention is ever made of them by early travellers.

² "The Habitat of the Winnebago." in the *Proceedings of the State Historical Society of Wisconsin*, 1906. Mr. A. C. Neville in a previous paper published in the *Proceedings* of 1905 sought to establish the thesis of a Green Bay home from the same data.

There is no necessity for discussing the types of effigy mounds in detail in this paper. A good discussion will be found in Stout's article. But it may be in place to note the absence of effigies of some clans, as well as to correct what appear to be mistaken identifications of others.

There are three kinds of clan animals that have not been found as mound effigies, namely the wolf, the buffalo, and the fish. It is just possible that the mound found near the asylum grounds near Madison, Wis., is intended to represent a wolf, but, even if this could be established, it would not explain the apparent absence of any more examples of one of the more important Winnebago clans. There is a large number of effigies that, for want of a better name, most Wisconsin archeologists have called "turtle" mounds.¹ No explanations can be offered of these peculiar effigies, if they are effigies, unless they are attempts to picture fish or unless they are altered water spirit mounds. The Winnebago had no turtle clan but the turtle plays an all-important part in their mythology. In all probability, the effigies of the clans not found today have disappeared or have been levelled.

Perhaps the most peculiar effigy mounds are the famous man mounds of which only two examples are in existence; and the so-called "intaglios." Good descriptions of both types have been given.²

The two man mounds have generally been regarded as inexplicable or connected with some prehistoric rite, and it consequently seemed useless to attempt any explanation. As there seemed to be no reason why these mounds might not fall into the same category as the clan mounds, the writer took the opportunity of inquiring about them among the older Winnebago. A number of the people asked knew nothing about them but fortunately two very old members of the tribe interpreted them as soon as they were described as representations of the warrior or hawk clan.³ As this clan belongs to the bird "phratry," no one had ever looked for any but

¹ The various types are shown in Stout's paper cited before.

² "The Preservation of the Man Mound," in vol. 7, no. 4 of the *Wisconsin Archeologist*, and "The Intaglio Mounds of Wisconsin," in vol. 9, no. 1, of the same journal; both papers by C. E. Brown.

³ The warrior clan is always pictured in this way.

bird emblems. It seems to us, that this is the explanation of these hitherto enigmatic "man" mounds. Only one possible adverse criticism could possibly be made and that would be to regard the above as a folk explanation. But, if we accept the explanations of the other effigy mounds as justified, then we will have to accept this explanation likewise.

In discussing the "intaglio" mounds, the writer must confess that he has not succeeded in obtaining any information at all about them from the Indians. We do not therefore wish to throw out more than a suggestion as to their possible meaning. "The intaglio effigies," to quote Mr Brown, "may be described as being the reverse of the ordinary effigy mounds. They are excavated out of the soil instead of erected upon it, the earth removed from the shallow excavation being heaped up with care along the edges and giving form and prominence to the animal shapes depicted."¹ The Winnebago frequently placed symbols referring to water deities under water, and, as ten of the twelve intaglios that have been described belong unquestionably to the Water Spirit clan, it may have been customary to keep these "intaglios" filled with water. Unfortunately the discovery of two supposedly bear "intaglios" militates against this suggestion. However, according to the Bear clan legends, the originators of that clan came from the water, as did likewise those of the Wolf and Buffalo clans. Speculation is, however, useless and we will have to do what we can to elicit whatever the modern Winnebago still remember about these strange features of Winnebago archeology.

We will now proceed to what is unquestionably the most unsatisfactory problem of our area; namely the nature and significance of the so-called linear mounds.

The various types have been best described by A. B. Stout and we will do best to quote him *in extenso*:

"The principal classes of linear mounds are as follows:

"The pure linear type is a straight, wall-like mound of uniform width and height. They are usually about two and a half feet in height and from ten to twenty feet in width. Some are so short that they approach the oval and platform mound types, while the longest are over nine hundred feet in length.

¹ Cf. *Wisconsin Archeologist*, vol. 9, no. 1, p. 6.

"The straight-pointed linear is usually of considerable length and differs from the pure linear, as given above, in having one end tapering to a long drawn out point.

"Club shaped linears are frequently found and kidney shaped linears are not wanting.

"The various linear types described above are sometimes modified by an enlargement at one end. This ranges from a low, flattened enlargement to a rounded well built conical mound. Various projections or appendages to some of the linear forms give figures that shade toward effigies proper. These types of linear mounds are mingled in the mound groups as shown in the various group plats.

"Besides the types already discussed there are peculiar combinations and composite mounds which do not admit of any rational explanation."¹

Many explanations have been given by investigators and, for that matter, by the Indians themselves of the significance of these linear mounds. Not only is it necessary to account for the peculiar and manifold shapes but for the equally strange combinations into which they have entered. With regard to the latter type, Stout refuses even to suggest an interpretation and dismisses them with words quoted from Fowke's dictum regarding the anomalous earth structures of Ohio, that "the builders of such figures probably knew what they were about, but we cannot even guess at their thoughts or intentions." Stout, however, takes a determined stand with regard to the linear mounds proper and interprets them as having been constructed for the purpose of symbolizing inanimate things and consequently as really conventionalized effigies. This seems to him the only satisfactory explanation. "It is evident," he says, "that there are intermediate or transitional forms between the linears and the pure effigy types with which they are mingled."² The existence of linear mounds extending westward into Minnesota and Manitoba, far beyond the limits of the effigy type, he admits, but he does not believe it necessary either to regard these latter as effigies or to change his interpretation of

¹ *Ohio Arch. and Hist. Society Quar.*, Jan. 1910, pp. 22-23.

² *Ibid.*, 24-26.

the significance of the former, a proceeding that, we must admit, is somewhat puzzling. Stout's interpretation is indeed a purely arbitrary one. Whereas his identification of the effigy mounds was based upon information obtained directly from some Winnebago Indians, that of the linears was based upon what he thought was the necessity of the case. As far as we know, he made no attempt to find out what the Indians knew about them.

The writer had occasion to visit the Wittenberg Indians during the summer of 1911 for the Bureau of American Ethnology and made it a point to interrogate as many Indians as possible concerning these mounds, and obtained a number of answers. All the Winnebago questioned claimed that the mounds had been erected by their ancestors, some even within the memory of their fathers, but no unanimity could be obtained as to their use. By far the largest number of individuals, however, insisted that these linears were defensive works behind which they would dodge during battle. These must not be confused with anything in the nature of breastworks or "fortifications." They claimed that they ought to be found in great numbers along Lake Koshkonong, because it was there that a terrific struggle had once been waged by the Winnebago against some hereditary enemy. As a matter of fact, according to Stout, in the small area of 31 sq. miles around that lake, no less than 481 linear mounds have been found and, if we take into consideration the fact that but fifty miles to the northwest, in the Sauk County area, 734 were found, we have within a radius of 231 sq. miles an enormous number of linear mounds. Whether the large number of mounds has anything to do with the statements of the Indians, is, however, doubtful. These two areas have, however, at the same time yielded an enormous number of effigy and conical mounds, 225 of the former and 646 of the latter, and the conclusion that forces itself on our minds, is that we have here the seat of a large number of Winnebago settlements. The linear mounds seem therefore to be characteristic features of some villages. A similarly large number of linears seems to exist in Crawford County according to the older investigations of Lapham. It may be possible that a continuation of the systematic and thorough studies made in Sauk County and Lake Koshkonong by Stout, will bring to light many

such linear areas closely associated with village sites. Many more that existed may perhaps have been destroyed and so we may never be in the thoroughly satisfactory position of actually proving the existence of such a correlation. This is exceedingly to be regretted, for the establishment of such a correlation would have been a fact of considerable significance. However, whether we accept this correlation as universal or not we will have to admit, at the same time, that there are numerous examples of linear mounds scattered over the "Dakotan" area, that can not possibly be brought into connection with village sites. We do know that numerous battles occurred, both along Lake Koshkonong and along the Mississippi, and that it would require no manipulation of the facts to interpret the mounds in the manner suggested above by so many Winnebago. But it might justifiably be asked, why these peculiar shapes? It is hard to suppose that they were of any importance in warfare.

As opposed to the above view, various interpretations have been advanced at different periods, the principal one being that of Peet who regarded them as game drives. But this explanation is purely arbitrary.

Although their interpretation as defensive works seems to be by far the most popular one, as we said before, two other explanations were obtained, one to the effect that they were the bases of lodges, and the other that some, at least, were snake effigies. There can be no doubt, we think, that, in reality, we are dealing with a number of problems here, and that some linears will unquestionably have to be regarded as snake effigies, to judge from their likeness to the snake effigies that various Indians have sketched and showed the writer. With regard to the other suggestion, even in spite of the fact that they had a name for the projections that are often found at one end of the linears and which would identify them as wood houses (*naⁿ tci*), it seems best to be sceptical. The enormous length of some of the mounds hardly seems to support such an interpretation. It was claimed that the reason mounds were selected as bases was because water could thus be most easily shed. In connection with the interpretation of the linears as lodge bases, it might be in place to add that the Winnebago, even as late as 1860, claim to have erected earth lodges. Every Indian questioned in Wisconsin

was positive about this. According to their description, the earth was excavated for some depth, the lodge proper being of various sizes and shapes and always provided with a long, often zigzag, entrance. The purpose of this zigzag was to make access difficult. The roof was made of heavy logs of wood, covered with earth and never projected far above the earth. If such was an old and favorite custom of constructing lodges and if it was still practiced as late as 1860, even if for a special purpose, the first question that naturally suggests itself is, where are the indications of these former earth lodges? May not many of the linears be the remains of them? With this possibility in mind we repeatedly asked the older men the question, but could not obtain any satisfactory confirmation. A more systematic investigation than was possible at that time is to be undertaken by Mr Lamere of Winnebago, Nebraska, and it is hoped that more definite information will then be forthcoming.

Before summing up our knowledge concerning these linears we wish to dwell again on Mr Stout's view. In order to account for the mounds under discussion he assumes that they are "conventionalized" effigies. Conventionalization is, however, a method of artistic expression exceedingly rare among the Winnebago and it is extremely hard to imagine that it should have been absent in all their old bead and porcupine-quill work, as well as in their woven fabrics and nevertheless develop in connection with their clan effigies. There is a possibility that some of the linears may either be very crude or hurriedly constructed effigies or, and this is more likely, that they may be effigy mounds that have been changed through the influences of weather and general climatic conditions as well as to a smaller extent by human hands, factors that have been neglected altogether too much in this connection, especially in the interpretation of what appear to be anomalies. From this point of view it would be suggestive to compare some of the so-called "turtle" effigies with the water-spirit or "panther" type, on the one hand, and with the linears, on the other. It is perhaps such "transitional" forms that have led Stout to postulate that all linears are effigies.

Leaving the "composite" linears to be discussed together with the conical mounds we may sum up as follows.

The linears may be either effigies, in part representing the snake clan, or they may be, in part, altered or mutilated or crude effigies; or they may be the bases of lodges or the earth coverings of earth lodges. We have the authority of numerous Indians that some are snake effigies; that any of them are "altered," etc., mounds is a possible interpretation from our data but has never been confirmed by the Indians themselves; that, lastly, they are in some way connected with the dwellings of the Winnebago, has been stated by a number of Indians, but it must await further evidence before it can be accepted.

The conical mounds need not detain us long, as there seems to be little doubt that they were used for the most part as burial mounds. Whether, however, they were in all cases constructed for that purpose may be seriously doubted, for, in some cases, the burials present undoubted evidences of being intrusive in character. A few ethnological notes may be in place here. Only chiefs were buried in mounds of the general or of the stone-chamber type. Ordinary individuals were not buried in mounds at all, although this varied, and a slight layer of earth would often be thrown over the grave. A considerable amount of data was obtained that will unquestionably lead to modifications of our interpretation of the conical mounds as constructed exclusively for burial purposes. It was maintained, for instance, that some were used as platforms from which to address the people; that others, again, were used as mounds or "stations" in the game of lacrosse; and finally that very many were the bases of lodges. We have, then, an apparent extension of the uses of the conical mounds which ought to entail an entire revision of our classification of these structures, and which ought to emphasize the need of greater care in interpreting all those mounds where human remains are found, as primarily burial mounds.

The composite type of mound, characterized by the union of a conical and of a linear mound or by the union of a number of each, was interpreted by Winnebago questioned as lodge bases connected with one another, the conical mound being the base of the lodge and the "linear" mound acting as a sort of connecting passage way. The Indians seemed far more positive and certain in this identi-

fication than in that of the linears, and there seems no reason why their statements should—for the present at least—be entirely ignored. As in the case of the linears, the Indians claimed that the purpose of using mounds as lodge bases was because they facilitated the shedding of water. It must be remembered that the shedding of water played an important part in the life of woodland Indians and may very well have influenced their method of building lodges. In olden times houses were often built on a scaffold with that particular object in view and with the kindred object of preventing excessive dampness.

The so-called earthworks of Aztalan can not be discussed here. An excellent summary is given in Stout's paper referred to above.

Apart from the mounds the objects of greatest archeological interest are: first the distribution of copper implements, secondly the material used in the manufacture of articles of general use, and thirdly the distribution of the flint and other arrow-heads.

In all likelihood almost all the copper found in Wisconsin comes from the aboriginal copper workings at Isle Royale, Keweenaw, Ontonagon, and elsewhere in the Lake Superior district. "A provisional description of the territory in which the greatest number of such artifacts has been found up to the present time, may be given as extending from about the middle of Milwaukee County, northward along the west shore of Lake Michigan to Door County, thence westward to the Wisconsin River or slightly beyond, thence southward along this stream to Dane County and eastward to Milwaukee County, the starting point. Embraced within this territory are the extensive lake shore village sites, from which thousands of articles have already been recovered, and certain well known sites in Green Lake and adjoining counties, the Rush Lake and similarly productive regions."¹

The region thus described embraces the Winnebago territory it is true, but this is also the territory subsequently occupied by some of the Central Algonkin tribes. It does not, it appears, follow the line of Winnebago migrations farther than the Wisconsin River to the west or farther than the southern boundary of Dane County to the south or southwest. No one has to our knowledge

¹ Brown in the *Wisconsin Archeologist*, vol. 3, no. 2, p. 58.

ever been able to obtain any information from the Winnebago that could in any way connect them with the authorship of any of the copper implements that were unquestionably in use among them when the whites first came and the remains of which are found associated with old village sites. The writer's experience has been the same. However, almost all the Indians denied that they had ever used copper before the arrival of the early French traders. We must consequently accept the view that for the Winnebago, at least, the problem connected with the occurrence of copper implements is not whether the Winnebago made them, but how they came to obtain them. The solution of this problem would be immensely facilitated if we had accurate knowledge of the distribution of copper among the Sauk, Fox, and Kickapoo, and if we were in a position to tell whether they had copper before their arrival in Wisconsin or not. We might then be in a better position to decide whether the Winnebago obtained their copper from these tribes or from some northern tribe, presumably the Potawatomi or Menominee. It is now generally supposed that they actually did obtain their copper implements through the intermediation of these two last mentioned tribes, although there is no really conclusive evidence therefor. That opportunities for transmission of such implements through the Menominee or Potawatomi were plentiful is unquestioned, and the only problem is whether the systematic exchange of copper implements was not conditioned by the appearance of the white traders. It seems rather hopeless to solve a problem of such a nature at this late day, but it might be possible to approach the problem in some other way, that might lead to more satisfactory results. If the Winnebago did not use copper implements of what material were the implements they used made? They could have been of either stone or wood. Unfortunately, the Winnebago remember very little about the implements used in early days and generally insist that they had almost none before the advent of the whites. This refers to all implements where sharp edges had to be made. They claim that they could have had no knowledge of the manner of manufacture before that time. However, they mention the fact that they used numerous objects of stone even within recent times. Wooden articles of any kind

they stoutly maintain have been known among them only since their introduction by traders who had obtained them from the Menominee and Potawatomi. It seems impossible that this should have been the case, and one is inclined to believe that this strong insistence upon the influence of the white traders is grossly exaggerated and a late historical development. Nevertheless they seem to remember so many customs of a remote antiquity and they have withal maintained their old beliefs so tenaciously until recent times that this forgetfulness of some things and not of others may really have a deeper meaning. We shall see that their forgetfulness with regard to the flint arrow-heads brings up the all important question; as to whether these objects are not truly pre-historic. As it would, to our mind, have been a relatively easy task to "manufacture" all the objects needed in their economic life out of antlers, unworked wood, unworked stone, seashells, etc., as they claim, may not their forgetfulness, in this case also, have some significance? For the present all we can say is that the Winnebago know nothing about the manufacture of copper implements and insist that they came to them through the intermediation of the white traders. The same or similar statements are made with regard to the use of "worked" wood of any description.

We now come to the last problem of Winnebago archeology and the one which it seems highly probable will turn out to be the only one that can be called strictly archeological, namely the nature and meaning of the numerous flint arrow-heads. They are found all over the state, in every nook and corner of Winnebago territory, in every stage of manufacture,—and yet the Winnebago of today regard them everywhere as the work of earth-worms. Any number of Indians assured us that they themselves had seen the worms making them. In the few cases where the old men were of a different opinion, we were assured with equal vigor that they were the "bones" of the water spirits and consequently holy. Numerous myths speak of them in connection with the water spirit. The Indians admit that they used them as arrow points but insist that in every case they were found in the earth, that in fact people were generally blessed with them. Mr Skinner informs me that the Menominee, on the other hand, remember very well how

they were made. Indeed no such scepticism seems to exist among the central and northern Algonkin tribes in general whereas some evidence has been obtained from the Oto, Iowa, and Omaha to the effect that this same curious belief as to the origin of the arrow-points existed among them. Among the Winnebago until recently three kinds of arrow-points were in use: one, properly not an arrow point at all but simply a sharpened arrow, the second consisting of sharpened portions of pieces of antlers, and the third consisting of a turtle claw that had been softened and straightened. It has generally been maintained that the presence of regular "quarries" absolutely clinched the hypothesis of a Winnebago origin for flint arrow-heads, but it seems to us that we would first have to prove that in every case where such quarries are found no tribe but the Winnebago had ever occupied that territory, because, had any Algonkin tribe been there, they might be held as much responsible for these quarries as the Winnebago. That they were not used within the recollection of the oldest men among the Winnebago, is undoubted because this question was repeatedly put to them with negative results. A man of eighty would easily be able to recollect what his grandfather told him and we would thus have fair testimony covering about 160 years; and yet all this testimony confirms the explanation given above. It seems to us, therefore, that it will be best to attach some significance to current belief as to the origin of the flint arrow-heads and to assume for the present that they were either the work of the prehistoric ancestors of the Winnebago or that of some tribe that occupied the territory before them, or—but this is extremely unlikely—that they were all Algonkin in origin. That they represent the only strictly archeological feature of Wisconsin seems to us the most probable interpretation.

What have, then, become of the "archeological" features of Wisconsin? A perfectly disinterested investigation of the ethnological data explains satisfactorily almost all the "archeological" features, in terms of the culture that was still a living force 60 years ago. The mounds,—linear, conical, and effigy,—are not mute evidences of a past "mound building epoch," but living, prosaic structures erected for purposes which are still remembered by Winnebago of this generation. And so it is with the significance of

the copper implements and with the meaning of the arrow-points. In other words, a purely detached archeological method of approach has created a number of pseudo-archeological problems; and very much labor and ability have been wasted in attempts to solve problems that never existed. Even in such a recently published paper as Stout's "Prehistoric Earthworks of Wisconsin," to which we are indebted for an excellent summary, we still find the following statement quoted with apparent approval: "From the evidence at hand, the occupation of Wisconsin can be classed in but two principal periods. The first being the effigy mound-building era, during which all classes of earthworks were constructed; second, the time elapsing since the custom of erecting imitative earthworks ceased."

There are doubtless many problems of Winnebago archeology that still remain to be solved, but it seems imperative before devoting ourselves to this task to determine what problems are really archeological. To what extent this can be accomplished by a preliminary study of the ethnology of the area in relation to its past history, it has been my aim to demonstrate in this paper.

NEW YORK CITY

THE RUINS OF TULOOM

BY GEORGE P. HOWE

THE ruined city of Tuloom is situated on the coast of Yucatan, Province of Quintana Roo, just south of the south end of Cozumel Island, and slightly north of Ascension Bay, and is marked on all charts of the coast. It was first mentioned by Juan de Grijalva in 1518¹ who says: "We ran along day and night, and the next day towards sunset we saw a burg or village so large that Seville would not appear larger or better. The same day we arrived at a bay, near which was a tower, the highest we had seen. We discovered a bay where a fleet would be able to enter." Ascension is the only bay on the coast that would answer this description. In 1840 the city was visited by Stephens and Catherwood.²

A body of Mexican troops is said to have landed there in 1900. Beyond this I do not know that it has ever been visited.

I believe that Tuloom is the center of a distinct archeological province consisting of the coastal area south of Cape Catoche, extending probably to the Rio Hondo on the borders of British Honduras, including the islands along the coast and reaching some distance inland. The other cities known to be in this area are El Mecco, Tamul, Ina, north Tuloom, and Boca Pilar and Bacalar to the southward. In addition we have the less important ruins on the islands of Cozumel and Mugerres and vague reports of large ruins in the interior.

Until the area has been more thoroughly explored, it would be rash to say what its most characteristic features are, but the unique characteristics of Tuloom and the ruins of Cozumel may be taken as indications in this respect. One feature of interest in this area is the probably long period of occupation. These ruins are the only ones definitely mentioned as inhabited at the time of the coming of the Spaniards; and perhaps later, for at the taking of Boca

¹ Report published in Paris in 1838.

² Stephens, *Incidents of Travel in Yucatan*, vol. 2, page 387.

On arriving at Tuloom a safe anchorage for vessels not drawing more than four or five feet of water will be found just south of the Castillo, formed by a coral bar that, starting from a point half a mile to the southwest, makes out in a northerly direction until almost abreast of the Castillo. The tides in this region are slight and need not be taken into account. There are two possible beaches for landing. The one lying north of the Castillo would be the most convenient, but unfortunately, just missing the shelter of the coral bar, suffers the disadvantage of considerable surf at times. The south beach lying at a quarter of a mile south of the Castillo is sheltered by the bar.

The circuit of the walls that surround the city on three sides is about a mile. In addition to this, there are said to be more buildings outside than there are inside the walls, but these I did not see with the exception of two small watch towers on shore, apparently duplicates of one inside.

As is shown in Stephens' chart (fig. 77), the walls on three sides and the sea on the fourth form a rectangle of which the Castillo is the center. Beyond the wings of the Castillo, which face west, are a series of smaller buildings, facing south, north, and east respectively, about a court, in the center of which is a mound with no trace of a building on it, but with traces of steps on all four sides. Stephens' chart (in so far as I was able to check it up) seems remarkably accurate, considering the difficulties of work in so dense a jungle and the short time he was able to give to it. I should



FIG. 78.—Walls near southeast end showing construction without mortar.

care to amend it only by saying that the buildings marked *E, E* on the north side of the court are more extensive than one would infer from his chart, making the arrangement of the court slightly more symmetrical.

The buildings at Tuloom show two types of construction, namely, the typical Maya vault, and the flat roof supported by

columns. The buildings using the Maya vault are for the most part in an excellent state of preservation, while all the flat roofs have fallen.

A feature of Tuloom is the complete absence of high pyramids. The buildings rest on rather low foundation mounds, steep on all sides and approached by one or more flights of steps. These mounds are faced with smooth cut stone, often panelled at the sides. The backs of the buildings are almost flush with the back of the mound.



FIG. 79.—Guard house at southwest angle.

Exterior stone stairways with low stone balustrades are used wherever it is desirable for an ascent, and are for the most part in good condition. No interior stairways were seen. The sacrificial pyramid in the center of the court shows steps on all four sides.

There were no buildings that can be described as typically residential unless, perhaps, the guardhouse at the northeast angle might be so regarded. The walls are still in an excellent state of preservation, except at the points where they approach the sea. They are made of comparatively small flat pieces of rough-cut

stone without mortar (fig. 78). At the northwest and southwest angles small guardhouses are built on the walls (figs. 79 and 80). The southeast gate described by Stephens has completely fallen, but the others all remain. The gates, which are about three feet wide, strike one as being very narrow until one reflects that these people had no beasts of burden. The lintel of the gate is always a single flat stone. On each side of the entrance the wall projects slightly outward and inward, making a narrow passage through which people could enter in single file. No traces of wooden gates for closing these entrances remain.

The wider doorways are supported by columns. The lintels are of wood, stone, or wood and stone combined, where wall thickness makes greater breadth desirable. The stone slab lies in the center with wooden slabs on both sides. No suggestion of carving was seen on any of the lintels.



FIG. 80.—Guard house on northwest angle.

The rectangular wall openings for ventilation occurred in the upper chamber of the Castillo on the sea side.

Stone benches seem very much in use around the sides and back walls of the rooms of the larger buildings.

Stone altars for burning copal in the form of basins are common, usually found full of ashes.

Where the Maya vault is employed, it is identical with that found throughout the area, having the typical shoulder and zapote poles set in the walls as supports.

No roof combs or flying façades exist.

The decoration is comparatively slight here as compared with other Maya sites, possibly because the stone is less suitable for carving. It consists mostly of coral and highly fossilized limestone readily worked for building purposes but not suitable for decoration. This difficulty was in some degree overcome by roughly carving the object to be decorated in stone, then covering it with stucco.

Wall paintings seem to have been common, but, save in one building, are largely obliterated.

As is usual with Maya buildings we have the plain lower and decorated upper zone. All the buildings here and one at Cozumel

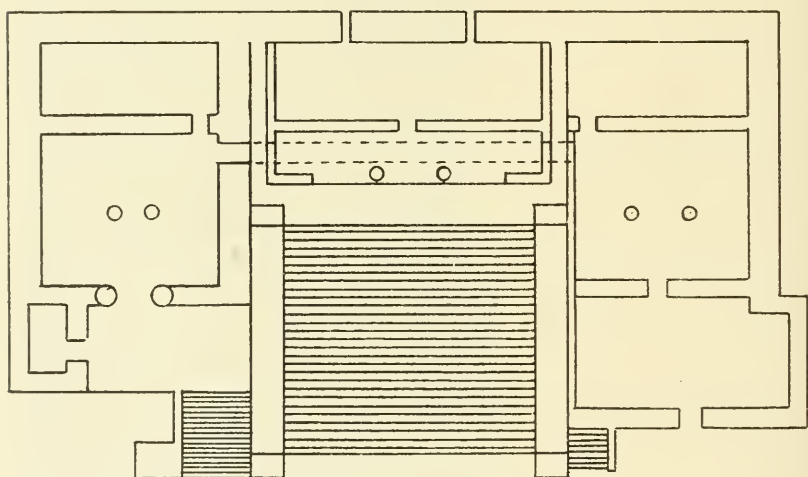


FIG. 81.—Ground plan of Castillo. Scale of measurements taken from Stephens.

show remarkable similarity in the top of the upper zone, which I think will prove characteristic of this area. This upper façade is divided into four parts as is shown in figure 80. Frequently over the door is the figure of a god done in stone covered with stucco.

The Castillo (fig. 81) is built partly on a natural elevation, partly on an artificial foundation platform, back to the sea, and consists of a main building and two wings. The main building is approached by a flight of steps wider than the building itself. The upper building entrance is supported by two round columns, the base of the right one projecting outward in a mass of rude

stone, suggesting a serpent's head (which may have been finished in stucco). The tops show a rude projection also suggesting the possibility of feathers or rattles done in stucco. I am not at all sure that these were serpent columns, but am inclined to think so. Over the central door is the figure of a god in the position of a man diving. This figure occurs in two other places in Tuloom and, so far as I know, is not seen elsewhere. He wears a rather elaborate head dress. Over the other two doors are niches that probably once contained images.

The interior of the building is divided into two corridors, the outer six feet, and the inner nine feet wide, united by a single doorway. Across the ends of the outer chamber and across three sides of the inner chamber run stone benches. The walls of the inner chamber are pierced by square outlets commanding the sea. I saw no traces of wall painting here or the "prints of the red hand" mentioned by Stephens. The wings, though probably of more recent construction, are much more ruinous than the main building, the roofs having fallen, as their wooden roof-beams have given way.

Their walls show traces of once extensive wall paintings. We found a passage not mentioned by Stephens, passing from the north to the south wing under the stairway, and in the middle of this another ruined doorway or break in the wall, possibly leading back to a chamber under the main Castillo. On account of the darkness and the fact that our matches were wet, we were unable to explore this. Because of the shortness of our stay it was impossible to explore or even make plans of the main buildings found. I shall therefore comment briefly on those shown in Stephens' chart (I found no others) and call attention to such points of interest as occur to me.

We landed at a point on the north beach and, entering the ravine mentioned by Stephens, passed up by the buildings marked *E* in his chart referred to as "building on the left with old walls visible in different places."¹ These old walls seem to show more extensive buildings than are indicated on the chart. One building is in excellent repair and shows traces of wall painting on the out-

¹ Stephens, op. cit., vol. 2, p. 389.

side, with some remarkably well preserved ones on the inside. Over the door of this building the same diving god appears as that over the Castillo. The wall paintings inside are in as good state of preservation as those of the Temple of Tigers at Chichen Itza. The subjects, however, are quite different, consisting mainly of gods, and pictures of a somewhat religious nature.

In one of the smaller buildings, marked *F* on the chart, we found the tablets thus referred to by Stephens: "In another house lying on the ground were the fragments of two tablets of the same character as those at Labphak."¹ It was nearly dark when we found these

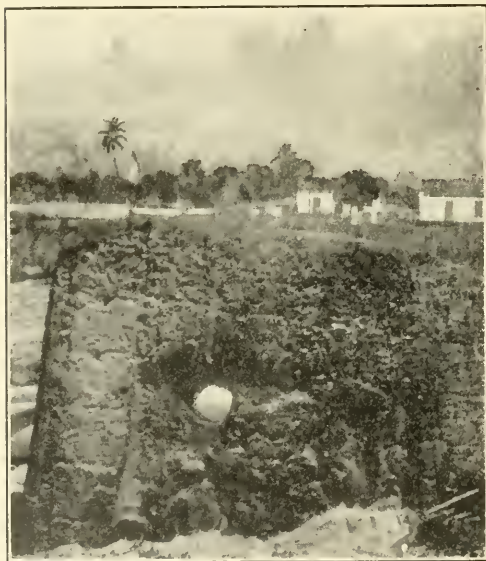


FIG. 82.—Fragment of tablet showing initial series reading 9.6.10.0.0. The series runs from above downward on the left hand side of the picture.

tablets and at that time I did not recognize their true character. It was only just before leaving that I took them out to the sunlight and was able to make out their real importance. The largest fragment shows an initial series reading 9.6.10.0.0 making 8 Ahau 13 Pax. The day and month signs are not shown on the fragment. The photograph (fig. 82) unfortunately does not make this clear.

The other fragment is more broken, but on one of the pieces I saw a large introductory glyph of an initial series. Both of these tablets can, I believe, be pieced together entirely.

Of the buildings marked *G* on the chart I was able to reach only one, that shown in the print opposite page 393 of Stephens, which again shows the diving god (not accurately drawn in Stephens)

¹ Stephens, *op. cit.*, p. 392.

on the wall over the door. I saw no tablets (mentioned by him) inside, though they may well be there.

On the second day of my visit I made a circuit of the walls of which the description in Stephens is remarkably accurate. The southeastern gate is entirely ruined, but all the others are in good shape, as are the two watch-towers at the angles. On completing the circuit, at guardhouse *J* we saw reason to fear an Indian attack and reluctantly decided to leave. The Senote, *K*, still exists, full of dirty, brackish water.

The building and altar at *I* were visited on the first day ashore, and are in most respects correctly described by Stephens (p. 407). The structure was built on a natural eminence overlooking the sea and rested on a low platform. It consists of a single chamber containing an altar for burning copal. Here I took a few measurements as follows: Chamber, 8 feet 5 inches by 6 feet; height to apex of roof 8 feet; height of door, 3 feet 10 inches, width 3 feet. Altar measurements: Basin slab, 3 feet 3 inches by 2 feet 4 inches. Stone slab in front of altar, 4 feet 6 inches long. The basin of the altar was full of old ashes (probably copal), but contained no other articles. Before the door, hidden in scrub, I found a "pineapple altar" like that described by Stephens (p. 407) but saw no reason to believe, as he apparently does, that it had been put to recent use.

On first thoughts it would seem obvious that the walls at Tuloom were built primarily for defence, but I am inclined to doubt this for the following reasons: First, there are only two watch towers and these are not stationed at points particularly liable to attack, such as the gates, but at the angles of the walls; furthermore there are no loopholes for arrows on the outer sides. In addition, it is reported, that there are more ruins outside the walls than within them. There is plenty of unoccupied space inside, which seems opposed to the fortification theory. While it is possible that there may be buildings inside the wall not seen by Stephens or myself, I am of the opinion that they are neither numerous nor large, for on my departure I cut across the country from the north beach, passing west to the Castillo and through the woods to the south wall encountering but one small ruin on the way. This may have been building *H* of Stephens' chart. Another point against

the fortification theory is that obviously not one of the buildings inside the walls was built for purposes of defense. I believe that the area within the walls was a sacred place for the entire section.

Outside the wall on the way to the south beach I passed a large pile of potsherds that would doubtless repay examination. Outside the walls to the northward are two small towers, apparently exactly similar to the one I measured north of the ravine. A little beyond these is said to be a well of good water.

No one can realize more fully than I the extreme superficiality of the work I was able to do at Tuloom, and my only excuse for publishing it is to call attention to the large and important area of Maya culture as yet unstudied. To carry on work in this region it is necessary to have the assistance of the Mexican authorities to the extent of allowing an escort of about thirty soldiers for work at Tuloom, Ina, and Boca Pilar. This would be absolutely necessary, as the Indians are extremely hostile and live in the immediate vicinity. I am convinced that any party not fully prepared to defend itself would certainly be attacked before working long at any of these places.

It might be well to describe some of the reasons for our short stay. On the beach we found many human footprints and freshly cut sticks, showing that it was frequently visited in search of turtle eggs. The city is in the midst of a very dense jungle and progress is made only by the constant use of machetes. We cut a passage up the steps to the Castillo, where we obtained a splendid view of the sea. Our examination of the buildings to the northwest of the court was continued until darkness compelled us to go aboard our boat for the night.

At about 9 P. M. we were disturbed by seeing a fire lighted for about ten minutes and then put out, on a headland about a mile and a half to the northward, where the men said was a well. We took this to be a signal.

The next morning we started to make the circuit of the walls, landing at the south beach. While on the north wall we saw a white flag on a hill a couple of miles to the northwest of us in the direction in which the village was supposed to lie. My companion, Mr Parmelee, then told me that, as we were landing in the boat

that morning, he had seen a white flag waved at the Castillo for a moment. It was evident that these were signals made, not for our benefit, but for that of others, as the flags were placed in positions where we would not have seen them except by accident. After a brief consultation with our men, who all agreed that an attack was imminent, we decided to finish our work hurriedly and leave. The remainder of the time was spent in bringing the tablets out into the



FIG. 83.—Ruin of small shrine with grotesque god on pillar. Ranch Santa Rita, Cozumel Island.

light and photographing them. After this we sent off all the men but one in the first boat from the north beach. Then, with our remaining man, we passed up to the south beach through the woods and embarked.

The use of white and black flags in signalling has been reported of the Indians in this vicinity. Grijalva says that the Indians of the coast signalled to him with flags. When Mr Holmes and Mr E. H. Thompson were off Tuloom on Mr Armour's yacht, they saw flags used as signals. I have no doubt that the party camped

on the point discovered our presence and sent a man up to the Castillo to find out our numbers when we came ashore, and then signalled back a report to the village. An attack, I believe, would inevitably have followed had we waited a few hours longer.

During my stay at Cozumel I visited a small ruin at *Rancha Santa Rita*, on the north end of the island, where I took a few photographs. One of these (fig. 83) shows a supporting column carved with the grotesque figure of a god, more suggestive of Mexico than Yucatan. The building is situated on a low artificial pyramid.

In closing I wish to express my thanks to Mr E. H. Thompson, of Merida, to Mr W. B. Young, agent of the Ward line, Progreso, to Mr Blake, manager of the *Ferro Cariles Unidos* of Yucatan, and to Señor Louis Medina, for their kindness to me during my stay in Merida; and to Mr Oscar Caldwell, of Caldwell and Bonastre, for his helpfulness at Cozumel. To Mr William D. Parmelee, who was with me through the entire trip merely for pleasure, I owe more than to anyone else such success as I have had.

BOSTON, MASS.

A COMPARATIVE SKETCH OF THE MENOMINI¹

By ALANSON SKINNER

THE Menomini were found by Europeans in the vicinity of Green Bay, Wisconsin, not far from the present reservation.

Their own tradition states that they first came into existence as transformed animals at the mouth of the Menomini River, near where the city of Marinette now stands. Certain it is that the Menomini have occupied the general vicinity of the region in which they now live for a comparatively long period, probably as neighbors to the Winnebago, who have a very similar origin myth. They state that they did not come into contact with the Sauk, their nearest cultural relatives, until considerably later—an assertion borne out by historical evidence. Besides the "official" tradition of their origin, there is a firm conviction among the older men that at one time their ancestors dwelt farther east, by the shores of the salt water.

MATERIAL CULTURE

In some respects, owing to the collections preserved in various museums scattered throughout the country, the material culture

¹Several years before his death, the late Dr William Jones made a preliminary trip to the Menomini reservation in northern Wisconsin under the auspices of the American Museum of Natural History of New York. His intention was to return to the tribe at some future time in order to make a more detailed study, but his untimely demise ended these plans abruptly. As the Menomini are little known to ethnologists, save through Hoffman's paper in the *14th Annual Report of the Bureau of American Ethnology*, the museum was desirous of continuing the work in this field, and consequently I was detailed to take up the task where Dr Jones left off.

In 1909 I paid a flying visit to the reservation, and in the summer of 1910 a more extended stay was made, supplemented by a still longer visit in 1911. A very complete collection representing the ethnology of the tribe was secured, and data were collected with the intent of publishing a monograph on the Menomini at some not far distant date. At present Mr John V. Satterlee, U. S. Government interpreter, a half-breed member of the tribe, is engaged as permanent field-worker for the museum in further adding to the data which he has very materially assisted in collecting, and the writer expects to pay several more visits to the reservation in furthering this work.

of the Central Algonkin peoples, the Sauk, Fox, Winnebago,¹ Potawatomi, and Kickapoo, affords better material for comparison with that of the Menomini than any other phase of their ethnology. The Ojibway and the Ottawa in general are not included because their affinities seem to lie with the northern Algonkin group.

Garments.—In the main the garments of the olden time Menomini were almost identical with those of the Sauk, Fox, Winnebago, and Potawatomi. They were not much different from those of the Ojibway, but lacked a number of their characteristics, this being more especially noticeable when the northern bands are considered. They also showed some similarities to the Iroquois and more eastern Algonkin tribes—the Lenapé or Delaware in particular.

Like their neighbors, the Sauk and Fox, the Menomini men roached their hair, but this coiffure was assumed for warlike purposes only; the ordinary style was to wear the hair long and flowing, with the scalp-lock hanging braided from the crown. The daily headdress was a fur band, preferably of otterskin, or a woven sash bound around the brows. A northern and western feature was the use of the entire skin of an otter worn turbanwise.

The shirts and leggings formerly used by the men were of leather, often dyed a dark blue or black, and generally embroidered with porcupine quills. So far as my knowledge extends the custom of dyeing the clothing was not common in the east, but sporadic examples occur. The Florida Seminole still dye their buckskin leggings a reddish brown with oak bark. The so-called Missisauga, or eastern band of Ojibway, are known to have made black-dyed moccasins some years ago, and the custom of coloring small pouches and other leather objects designed to be decorated with porcupine quill-work was rather more widely spread.

While the breechclouts of the Sauk, Fox, Winnebago, and Ojibway of today are invariably decorated with beadwork, those of the Menomini are plain, and there is evidence that this was always the case.

Menomini moccasins were puckered in front, and were of the soft-soled woodland type. They resemble an antique Ojibway form,

¹ The Winnebago are Siouan linguistically, but belong to the same general cultural area.

and are like those of the Delaware and of the Mohawk Iroquois. They are entirely different from those worn by the Sauk, Fox, Winnebago, and Potawatomi.

Owing to the fact that they lived so far from the buffalo country, robes made of buffalo skin were seldom if ever to be had, although smaller ceremonial articles made from buffalo skin or bone were used.

The women's costume resembled that of the other Central tribes. It was a two-piece garment in contradistinction to the simple single gown of the Plains and the north. Besides its range in the Central region, this type had a somewhat widespread eastern distribution. It was found among the Iroquois of New York, and the Delaware, although there is reason to believe that these peoples never used upper garments, other than robes before European contact, wearing only a skirt or leggings. A somewhat similar type of two-piece woman's garment has been observed among the Missisauga Ojibway, the Penobscot of Maine, and the Seminole of Florida. The Cheyenne, when first known, used this type of squaw dress but later abandoned it. The chief variations, within and without the Central district, occur in the presence or absence of a waist, and its shape.

Among the Menomini the garments were a shirt-waist, formerly plain, but now adorned with a huge ruffled cape; a skirt made of a piece of square leather wrapped once around the waist, and left open at one side. The border of the skirt was beautifully ornamented with porcupine-quill embroidery. Short leggings, reaching to the knees, and dainty moccasins completed the costume.

The favorite way of wearing the hair was to plait it in a single braid down the back, but it was sometimes "clubbed" and covered with a cylindrical headdress from which swung beaded or quilled trailers. This type is more often found among the Sauk, Fox, and Winnebago. In earlier times it is said that the woman's headdress was not ornamented.

Of course, in recent years, buckskin has given way to traders' cloth, and porcupine quills to beads, and later to silk ribbon appliqué, but the general type of the garments has remained the same. Nowadays the women cover their costume with a profusion of German silver brooches of native make.

Lodge Types.—For dwellings the Menomini employed the square bark-lodge for summer, and the semi-globular mat-house for winter. They apparently have no knowledge of the dirt-lodge. For ceremonial purposes only, they employ the long-house. The square bark-house was formerly found throughout all the Central region, among the Santee Sioux, the southern and Missisauga bands of Ojibway, the Iroquois, the New England tribes, the New York Coastal Algonkin, and the Delaware. The distribution of the semi-globular house is almost equally wide. It was not used by the Iroquois, but was found to the north among the Ojibway and Cree. The Menomini have no knowledge of the conical lodge, and indeed this seems to be a more northern and western feature.

Manufactures.—In their ordinary implements and processes the Menomini resemble, not only the other Central Algonkians, but, to a lesser extent, the more northern, southern, and eastern tribes of the woodlands as well, for cognizance of the domestic arts, manufactures, and utensils is apt to spread in ratio with the usefulness of the knowledge in question in a given environment. Thus a marked difference will be found between the tribes roughly comprised in the area east of the Mississippi and the Plains people whose environment demands different usages and utensils.

Tanning.—The tanning process as practised by the Menomini occurs among the following tribes with inconsiderable variation: Sauk, Fox, Winnebago, Ojibway, eastern Cree, Iroquois, and, in the northwest, the Chippewyan. In the south a somewhat similar process, differing however in several essentials, has been reported among the Florida Seminole and the Choctaw. It has nothing in common with the Plains in detail, though the same general processes, such as scraping and fleshing, are in part the same, but different tools are used.

The Menomini process consists in flaying, scraping, beaming with a draw-shave shaped implement over a smoothed and obliquely inclined log, various washings and soakings in liquor made from dried deer's brains mixed with water, softening by rubbing with a wooden spatula, and smoking. Buffalo rawhide is said to have been used for shields, as among the Winnebago and perhaps Sauk and Fox. The rawhide parflèches or trunks of the latter were unknown to the Menomini.

Pottery.—The potter's art as practised among the Menomini differed from what little we know of that of the surrounding tribes. Prepared clay was daubed over a ball of basswood twine and allowed to dry. When the clay coating was sufficiently dry for use, the twine was unravelled from within it, and the earthen shell remained. This received some finishing touches and was then ready for use without further preliminary save drying in the sun. Firing was not known. Dr Paul Radin has assured me that the process employed by the Winnebago is entirely different, and my personal notes taken in 1908 among the northern Ojibway state that these people used the more common coil method.

Weaving, Textiles.—In common with the other Central tribes, the Menomini make excellent woven bags of several varieties, which they use for holding all manner of things, from clothing to sacred medicines. These are usually made from basswood twine ornamented with geometric designs, and conventional representations of animals. Many of the designs are symbolic, but knowledge of their meaning is largely lost. They use life figures less often than some of their neighbors. Bags of this kind, with very similar designs, are not only common to all the Central tribes, but are found to some extent among the Ojibway, especially those of the southern and Missasauga bands. They were once found among the Delaware,¹ and there is documentary evidence that they were used by the New York coastal Algonkin, and, perhaps, though this is less certain, by the Iroquois.

The Menomini followed the widespread custom of weaving reed floor mats, and they used these also for one inner lining of their wigwams. A lesser art was the manufacture of woven sashes, also found among the Central tribes in general, and in the east at least among the Iroquois. As has been stated elsewhere, they formerly wove various ornaments from the quills of the porcupine.

A modern occupation is the weaving of belts, bags, and fobs from beads, which has been described in detail by Hoffman. This recent practice is very widespread throughout North America, and is in the east and central regions probably a direct offshoot of

¹ M. R. Harrington, Some Customs of the Delaware Indians, *Museum Journal*, University of Pennsylvania, vol. I, pt. 3, fig. 33, p. 54.

the old time quill weaving. In the west and south this may not be the case. It is also possible that in the eastern coastal region shell beadwork was the prototype of this form.

Quillwork.—Menomini porcupine quillwork is a thing of the past as an art, but examples of this work were to be obtained on the reservation until recently. In former times it was very largely used. Owing to the scarcity of this beautiful antique work, little can be said of it from a comparative standpoint. It was open, delicate tracery rather than the solid embroidery of the plains, and resembles in this respect the very old examples in the Peabody Museum at Cambridge. Most of these were collected from the Ojibway, but some may come from other tribes. The work also closely resembles old Seneca, Iroquois, Huron, and New England Algonkin embroidery in quills and moosehair. It is less like what I have seen of the Sauk, Fox, and Winnebago, which resembles that of the Plains area, solid designs rather than openwork. A few species are of woven quills, and such specimens are in existence from the New York coastal Algonkin, the Cree, and the Athapascan peoples of the far northwest.

Agriculture—Wild Rice.—The Menomini were not dependent upon the chase as much as their northern neighbors the Ojibway, nor were they so thoroughly agricultural as some of the more eastern tribes, notably the Iroquois. Their place was between the two. Corn was the staple, but beans and squashes were also grown. About tobacco the statements of the old people conflict. Many, in common with the Ojibway and Cree to the north, claim that they did not know tobacco before the advent of Europeans, but used a variety of kinnikinnik. This seems most plausible for, although there is a myth of the Mänäbus cycle accounting for the origin of tobacco, this may well refer to kinnikinnik.

Wild rice disputed with corn the premier place among Menomini vegetable foods. The harvest was attended by no little ceremonial, including sacrifices to the Powers Above, who gave the grain, and the Thunderers. The braves, or police, had charge of the harvest and prevented anyone from gathering the rice or even venturing upon the beds until the time appointed by the chief. There seems to have been no distribution of the beds among individuals, but rather

a communal use of the whole. There was a taboo against carrying the seeds from one lake and planting it in another. The subject has been admirably treated from a comparative standpoint by Jenks in the *Nineteenth Annual Report of the Bureau of American Ethnology*, and need not be duplicated here. A number of varieties of berries and roots, including the wild potato, were also used by the Indians as food.

Food and Its Preparation.—The Menomini had a large number of recipes for the preparation of corn foods, many of which must have been in vogue among their neighbors, but lack of data from other tribes prevents us from treating this subject with the attention that it deserves. There are a number of similarities with the Iroquois¹ and the Delaware.² Husking bees were frequent in the fall, as they were among the Sauk and Fox, and probably other Central tribes.

Paunch boiling, and cooking in birch-bark dishes swung over the fire were practised. These customs are found to the north among the Cree and probably the Ojibway, and among certain Plains tribes, notably the Blackfeet. Whether they are known to the other Central Algonkians remains to be seen. Stone boiling is said to have been unknown.

The Menomini preferred to roast their meat rather than to boil it. This is not true of their northern cousins the Ojibway and Cree. As usual data is lacking for the other Central tribes, but presumably they were more accustomed to boil their meats than to roast them.

Fish, especially sturgeon, was formerly very largely eaten, but at present the Indians are unable to obtain them as abundantly as when they lived on the lake shore. Sturgeon roe, prepared in various ways, was a favorite article of diet.

Travel and Transportation.—The dug-out canoe was the Menomini carryall *par excellence*, but the birch-bark canoe played a secondary part. It is probable that the Menomini were better canoe-men and poorer horsemen than any other of the Central tribes. The reason is not hard to find. Their environment was one of heavy forests to be traversed principally by water, hence the canoe was

¹ A. C. Parker, Some Iroquois Corn Foods, *Bull. N. Y. State Museum*.

² Heckewelder, *Indians Inhabiting the States of Pennsylvania and New York*.

a constant necessity until very recently, whereas, lacking prairies to a greater extent than the Winnebago, Sauk and Fox, and other more southern and western tribes, they did not obtain or use horses until recent years. As a consequence, all the trappings—saddles, hobbles, and the like—which are used by the Menomini are copied from their nearest neighbors. The Winnebago used the dugout canoe, and the Ojibway bands lying nearest the Central tribes also did to a certain extent, but the birch-bark craft was essentially their favorite vessel.

The travois was unknown to the Menomini on the one hand, and on the other they lacked the toboggan of the north. They used the pack-strap, in common with the other Central tribes and the northern and eastern groups, but they did not have the carrying-basket found in the east. The parflèche of the plains and the raw-hide trunk of the Sauk and Fox were alike unknown to the Menomini, who made birch-bark baskets serve for their food, and woven bags for carrying household effects.

Signs, Signals, and the Sign Language.—A system of signs for marking the trails in the forest was once in vogue, but has largely died out. The Ojibway and Cree still use these extensively. The sign language is almost forgotten. Picture writing is fairly well developed. Song scrolls on birch bark and representations of dreams on bark or wood are found.

Art.—The art of the Menomini was decorative and religious. Decorative designs occur on almost everything which they used. Geometric forms prevail, but realistic figures are not uncommon. A great many figures had a certain amount of symbolism. For instance, on a woman's paddle appears the incised figures of a lacrosse bat and a war club, placed there by the man who carved the implement. These are symbolic of the Thunderers, and signify that the maker was under their protection. Again, the totem of the maker or owner frequently appears in various utensils. On bags one discovers woven designs representing various sacred or semi-sacred animal gods, placed there with the hope of soliciting the patronage of the power represented.

Symbolism in color is also found—red signifies day, hence also dawn, light, warmth, summer, happiness. Black on the contrary,

or blue—for the Menomini do not distinguish between these colors, and green as well—means night, sorrow, winter, or death. Again, since red signifies day and dawn, it is also used to represent the east, and black generally means the north. These colors with their meanings are used chiefly in ceremonials. The colors used in embroidering women's moccasins, and in the appliqué work on female dresses are said to have reference to the Sacred Sisters of the Eastern Sky, who are the patrons of women. How far this color symbolism extends to other tribes in this or other regions, I am unable to state. Data is lacking, but this, as usual, does not necessarily mean that these things are unknown among them. Oddly enough, save for the three or four colors enumerated, I have been unable to get any further symbolism.

RELIGION

General Concepts.—Here again, so far as our information goes, we find the Menomini in general accord with their neighbors, save that it appears that the Menomini have reduced their scheme of the universe to a more definite system. They divide the universe into two main sections, the Upper and Lower worlds. These in turn are divided into four parts or tiers each, and are separated by the earth. Each world has its presiding deity. The Upper world, peopled by beneficent Powers, is ruled by Mätc Häwätuk, who dwells in the fourth tier of heaven. Beneath him come the Thunderers, mythical birds inhabiting the ether above the air, the golden eagles, and the lesser birds of the air, commanded by the bald eagles, in descending order. These are his servants, and, since they come into actual contact with mankind, and Mätc Häwätuk does not, they receive more actual homage than their master, who really appears only as a figurehead. The Powers below are governed by a white bear who resides in the fourth tier of the under-world. He has a "naked bear" as his especial attendant. The other tiers in ascending order towards the earth contain his servants. The first is a white panther with its attendant, a white beaver, then a white deer with its attendant, a black wildcat, and, next the earth, the horned hairy snakes. Unlike Mätc Häwätuk, the supreme god beneath, because of his power for evil, which renders him an object of dread, receives many direct sacrifices.

Similar beliefs seem to occur to the north among the Ojibway and Cree, who make elaborate offerings to the chief underground bear in order to secure their food supply. Something of the sort is also found among the Menomini, though the apology to the bear before slaying it does not seem to occur. Whether the concomitant beliefs concerning the other tiers of "Heaven" and "Hell" are also held by the Ojibway and Cree, I can not say, but the evidence that I have gathered among them seems to suggest this. As for the Central tribes, beyond the knowledge that they know of the Thunderbirds, we have very little to go by. It is possible that the Delaware have a somewhat similar scheme of the universe, but they have a twelvefold division. With characteristic formality the Menomini have assigned to each of the Powers its exact name and definite place in the proper tier, whereas there is reason to think that the neighboring tribes are more vague in their conceptions of the Manitous. Dr Wissler points out that similarities in the beliefs concerning the strata of the upper and lower worlds have been found by Dr Walker among the Teton Dakota.

Afterworld.—The Menomini believe in a four-day journey to the hereafter; before reaching the goal the soul is tested and must cross a log bridge guarded by a dog. Many Menomini religious concepts are shared to a lesser degree by the tribes to the north, namely the Ojibway, Ottawa, and Cree, who in the northern part of their territory, where I have been among them, seem to have a disintegrated version of most Central Algonkin concepts. Other beliefs concerning the fate of the soul and its journey to the afterworld are found in very similar forms among the neighboring Sauk, Fox, and Winnebago, and to a lesser extent also among the Eastern Cree and Ojibway. That some of these theories have very wide credence is proved by the fact that the particular point in question, the beliefs concerning the journey of the soul to the afterworld, occur in very similar versions among such widely separated peoples as the Seneca Iroquois and the Seminole, which seems to indicate that a search would reveal them in the intervening region.

Worship.—The customs connected with the worship of the various gods seem also fairly widespread, but here we have still

less upon which to base our comparisons with other tribes. We do know, however, that all the Central Algonkin possess means of manipulating their deities through various formulæ, charms, and bundles of associated charms. Only extended study will bring out the differences and similarities between the methods employed. Certain it is, that the bundle of the Menomini, and probably the bundles of the other tribes of the region, differs from those of the northern plains Indians—the Blackfoot for example—in that it is conceived of and used as a unit, the songs usually referring to the bundle as a whole and rarely to the separate articles that go to make it up.

The Medicine Lodge society, of course, forms a prominent feature of Menomini religious life, but in the presence of Dr Radin's article on the corresponding organization among the Winnebago, and Dr Hoffman's monograph detailed attention here is unnecessary. Suffice it to say that Hoffman's paper is by no means final—it is a good objective account, but the author never succeeded in penetrating the deeper mysteries of the society.

The orders of the Wabano and Jesukaid are also found, and here perhaps we have northern influence through the Ojibway and eastern Cree, among whom these classes seem to be of more importance than the Midé, but subsequent discoveries among the Central tribes may reverse this dictum. The so-called "Dream Dance" also has considerable vogue, but probably does not differ essentially from the corresponding dance among the Sauk, Fox, Winnebago, Potawatomi, and Ojibway, since all these tribes have obtained this ceremony from the Potawatomi of the prairies.

Witchcraft.—Of a slightly different nature is the society of witches, which seems to have obtained admission to the ranks of the Medicine Lodge, probably of late years. The practices of the witches are entirely of a malevolent nature, and resemble very closely those found among the Sauk, Fox, Ojibway, Winnebago, and Iroquois. In fact the practice of the "black art" is probably very widely spread. The Menomini feature seems to be the formation of an organized society, yet among the Iroquois we find a somewhat similar association of witches in the Seneca Idos.

Distribution of Concepts.—One great reason for the wide dissemination of religious and magical lore is the custom so universally found of buying the secrets of his success, in full or part, from a mighty magician. Among many Central and Northern tribes a man would frequently travel a great distance for the sake of purchasing a particularly famous or powerful medicine from its owner.

Another reason for the spread of religious concepts is the fact that many of the religions of North America during historic, and in all probability in prehistoric times, were Messianic and missionary cults, so that ambassadors in the cause of these creeds spread them broadcast among a credulous population who would not accept other changes or innovations until convinced of their practical use. The Central Algonkin have produced or received many such prophets.

FOLKLORE

In regard to folklore, the Menomini have many features in common with the Fox, whom they closely resemble in some respects, particularly in regard to the motifs, rather than the method of narration of their stories. In the latter instance they more closely correspond to the standards of the Ojibway and Cree of the north, who prefer a long, detailed account to a short, curt, anecdote. Some of their main motifs, especially the Culture Hero cycle, are found far to the west, among the Assiniboin, who in turn must have had them from the Cree. The sacred portions of the stories of Manabos, being decidedly esoteric, may be original to them, but portions resemble the same cycle among the Fox.

Besides the myths, lengthy legends occur, and short "true stories" very like those of the Fox are frequent. Lesser tales are often more widely spread, due perhaps to contact with the main current of the fur trade, flowing westward from the lakes. Thus we find the well-known Plains story of Turtle's war party among the Menomini, and again among the Seneca Iroquois. A rare feature in North American native folklore is the bodily adoption of European, probably French, tales. There is no migration myth, but there is a tradition that the Menomini came into existence as transformed animals within the limits of their historic habitat.

There is, however, an unofficial tradition that they once lived to the east.

SOCIAL LIFE

Organization.—The Menomini differ from their neighbors more in this phase of their existence than in any other. There is reason to believe that the Menomini came into the region which they at present occupy with their social organization completely formed, and, as environmental conditions did not require any change or modification for convenience sake, they have remained unchanged. Suffice is to say that what knowledge we have of the social organization of the Sauk, Fox, Winnebago, and Kickapoo, goes to show that no two groups are alike.

Tribal Divisions.—The Sauk, Fox, and perhaps Kickapoo and Potawatomi, possess two social divisions into which members of the tribe enter at birth, and which play a more or less important part in the selection of opposing parties for social and religious purposes. Nothing of the sort is found among the Menomini and Winnebago, yet there is very little in common between the two tribes. The Menomini are divided according to my information, Hoffman to the contrary notwithstanding, into ten exogamic phratries with paternal descent. The clans of which the phratries are composed are led by the clan which bears the same name as the phratry, and which is supposed to be composed of the direct lineal descendants of the original ten animals who became human to form the Menomini tribe. Not all of the clans have animal names, one of them being the Wave clan. The functions and rites of the clans, save that there is one royal, or leading, clan in the head phratry from which the tribal chiefs are selected (the office, by the way, tending to be hereditary), are vague. The joking relationship occurs, as it does among the Ojibway and Potawatomi. The mother-in-law taboo is found. Age societies, like those of the Plains, are unknown.

In administering affairs, there is a council of chiefs and tribesmen. The braves, men who have achieved distinction in war, are the camp police, and there are also hereditary officers, who make peace in internecine brawls. Trials of offenders against law and order are held with set formality. A similar system is found among the Blackfoot.

Mortuary Customs.—Bodies are buried in the ground, with elaborate ceremonies, which seem to resemble those of the Winnebago, at least superficially. Some features, such as the taking of the corpse through the window, or formerly through the back of the lodge, instead of through the door, are like those of the Ojibway north of Lake Superior, and many of the mourning customs closely resemble those of this tribe.¹

Small grave houses identical with those of the neighboring Winnebago were observed and resembling those of the Sauk. I am not acquainted with Potawatomi and southern Ojibway burial customs, but suppose there is a similarity. The northern Saulteaux, Ojibway, and Cree do not erect a house over the grave at present, but build a small fence around it. The Menomini made the headboard with the totem animal of the deceased.

War Customs.—War chiefs are men who have received divine inspiration usually accompanied by instructions as to the making of a sacred war bundle. Here we are again embarrassed by a lack of published material, but it seems safe to assume that Menomini war customs were fairly similar to those of their Central neighbors. It is known that the Winnebago also had war bundles and sometimes joined with the Menomini in forays against mutual foes, but to what extent the rituals of the sacred objects were the same can not be stated. The Sauk and Fox also used these palladiums to manipulate the war gods. Apparently, from J. O. Dörsey's account of the Omaha, there were many points of similarity with them, but his account seems vague and incomplete, no doubt owing to the natural reluctance of the Indians to speak on the subject. On the warpath the leader was always accompanied by his nephew, and this is also true of the Winnebago.

CONCLUSION

On the whole, to sum up briefly, the Menomini resemble most those tribes directly in contact with them to the south, east, and west. They have received a slight influence from the north, but they differ manifestly from the tribes of the Plains. With the

¹See especially Peter Jones, *History of the Ojibway Indians*.

southeast, they have but little in common, save a belief in the hazardous journey of the soul to the afterworld, and some mechanical processes in material culture. With the eastern woodland tribes a larger number of similarities, many of them in regard to widespread beliefs and customs, may be noted, but, as has been stated, this does not seem remarkable when we consider that the contact of the Central and Eastern tribes along the highway of the Great Lakes was so long and continuous during the years of the fur trade, and take into account the similarity of environment between these people and the Menomini, and the popular traditions of the latter which point to a former residence farther east.

Thus it seems that the Menomini were among the first of the Central tribes to occupy their present area; it is probable that they came into the region with their social organization fully developed. When other tribes appeared there came a gradual fusing of their material culture with that of their neighbors, the customs and processes best adapted to their environment and general mode of life being mutually assimilated. In the meantime the immediate neighbors of the Menomini acted as buffers against innovations from the eastern, northern, western, and southeastern areas, so that the Menomini have remained the least affected after the general blend of local culture was over, of all the Central tribes, and stand today as most typical of the region which they represent.

HARVARD UNIVERSITY,
CAMBRIDGE, MASS.

CERTAIN EARTHWORKS OF EASTERN MASSACHUSETTS

By CHARLES C. WILLOUGHBY

MOST of the earthworks of the New England Indians have been partially or wholly obliterated by the continued cultivation of the land for nearly three hundred years. It is only in the woodlands and waste places that we may hope to find these remains in a fair state of preservation. They usually consist of embankments and trenches, the former about 12 to 30

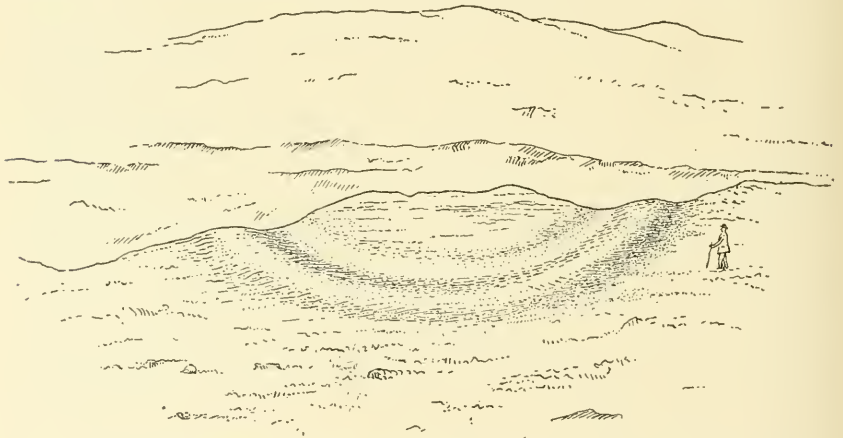


FIG. 84.—Marblehead: Portion of a circular embankment and trench. In quarrying stone the hill has been partially cut away and the greater part of the earthwork destroyed. The enclosed area was 50 feet in diameter, measuring from center to center of the embankment.

inches in height, and the latter of corresponding depth. There is commonly but one trench; sometimes, however, a trench appears upon either side of the embankment. The usual height from the bottom of the trench to the top of the embankment is 2 to 4 feet, and the distance from the outer edge of the trench to the opposite edge of the embankment averages about 13 feet. The embankments were doubtless originally somewhat higher and the trenches deeper. Their combined measurements were probably about the

breast height of an average man. Most of these formerly enclosed areas of various extent which were doubtless village or house sites. A few years ago the circular earthwork near Marblehead, a segment of which is shown in figure 84, was in a good state of preservation, but in quarrying stone a part of the hill was cut away and the greater portion of the work destroyed. This earthwork is mentioned in a deed of 1658 as "the Indian fort." It was originally about 50 feet in diameter and probably enclosed a single large house. The embankment undoubtedly supported palisades 10 to 12 feet high made of the trunks of small trees, the structure being similar to certain small fortified strongholds mentioned by the early colonists.

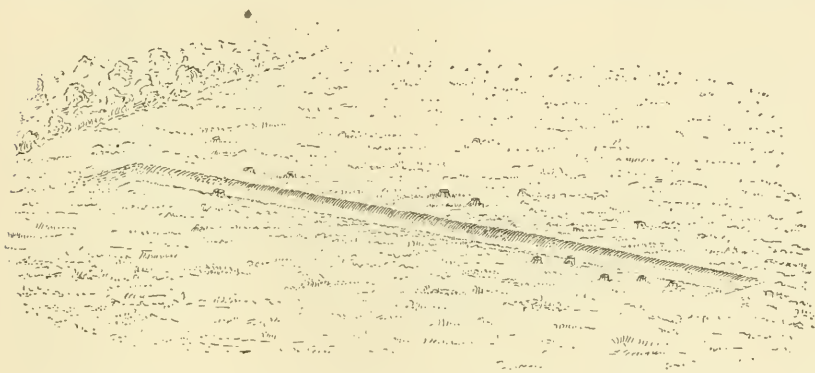


FIG. 85.—Andover: Remains of a square enclosure near Haggett's Pond. The embankment and trench forming the eastern side are well preserved, and are 216 feet in length; the other portions have been destroyed by cultivation.

A single large house was sometimes built within a square or oblong enclosure like the one seen by Champlain at Saco, Maine, but this type of enclosure seems usually to have contained several cabins. Near Haggett's Pond, in the town of Andover,¹ are the remains of what was probably a square enclosure, but one side and two corners of which can now be traced (fig. 85). These lay within the edge of a wood, and, although the trees have been cut off, the ground has not been disturbed at this point. The other portions of the embankment and trench have evidently been obliterated by cultivation. This was an ideal location for a village. The site occupies

¹ The first notice of this earthwork is on page 153, *Bulletin III* of the Department of Archaeology, Phillips Academy, Andover, Mass.

nearly the entire width of a level highland. A few feet to the north is a declivity 15 or 20 feet deep, at the bottom of which is a brook connecting with the lake. It is probable that in former times canoes were brought to within a hundred feet of the stockade.

Besides the circular and square enclosures, there were evidently extensive areas of irregular form, sometimes subdivided into sections, the direction of the stockade being determined by the contour and character of the land enclosed. The most extensive and best preserved earthwork of this type known to the writer lies in the town of Millis, about twenty miles south of Boston. It is situated on the shore of South End Pond,

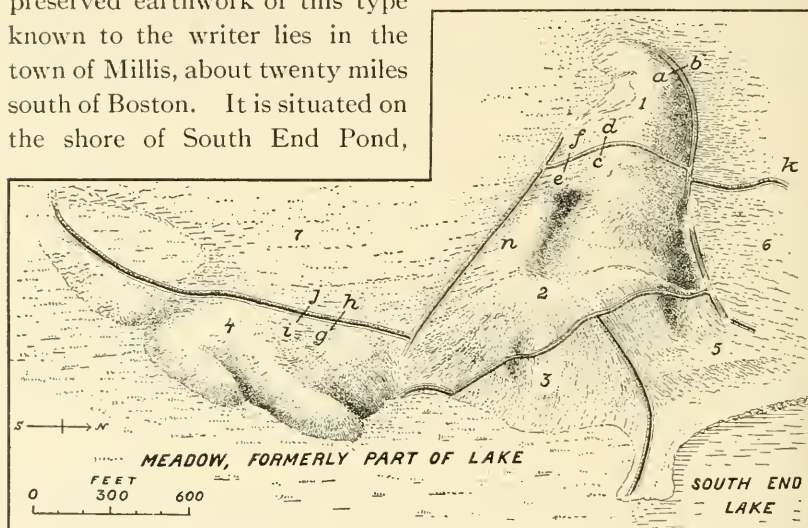


FIG. 86.—Millis: Embankments and trenches enclosing upland, western shore of South End Pond. The amount of land in areas 1-5 is approximately 31 acres.

an expansion of Boggestow Brook which flows into the Charles River. The general character of the earthwork, and the contour of the land enclosed is shown in figure 86. The hills which make up a greater portion of the enclosed areas are covered with trees and the land has never been cultivated. The greater part of the land bordering the hills has been under cultivation for many years and it is quite certain that portions of the embankments have been levelled and the corresponding trenches filled. About 6,000 feet, or approximately $1 \frac{1}{7}$ miles of embankments remain. The combined length of areas 1 and 2 is nearly

2,100 feet, and the amount of land in areas 1, 2, 3, 4, and 5 is approximately 31 acres. This land consists of glacial hills of irregular outline, with steep banks and deep gullies. Some of the depressions would form a good protection from the winter winds. The embankment and trench which undoubtedly enclosed the western end and the greater portion of the southern side of area 1 have been destroyed, probably by cultivation. An extensive meadow borders the eastern edge of areas 3 and 4, and it is very probable that when the earthwork was built the waters of the lake covered at least a portion of this meadow. Area 5 is the only one now bordered by water. The land at 6 is of medium height and

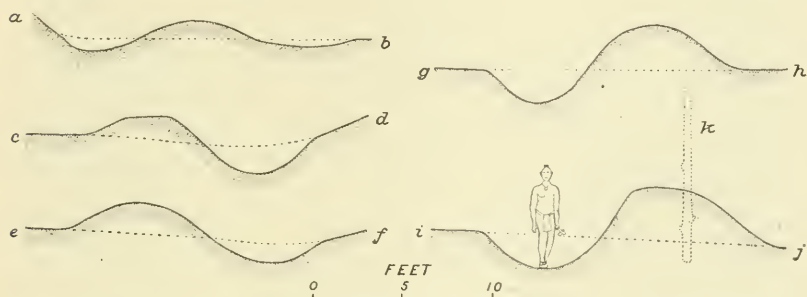


FIG. 87.—Millis: Cross-sections of embankments and trenches at points indicated in fig. 86; *k*, probable position of palisades.

the embankment at *k* probably continued toward the water and enclosed this section. It is somewhat doubtful if the land at 7 was enclosed, although the turning of the southern extension of the embankment toward the west indicates that it may have been. The land here is fairly low and level and is under cultivation.

It will be noted that the trenches are on the inner side of the embankments only, with the exception of the northern side of area 1, where a ditch may be traced on either side for nearly two hundred feet. In the neighborhood of these works, but beyond the limits of the sketch (fig. 86), are a few indications of walls and ditches which may have formed parts of this stronghold.

From the accompanying photographs and drawings of the embankments and trenches (figs. 86-90), a good idea may be had of

the present appearance of these remains. It seems probable that the embankments supported palisades, and that within the enclosures thus formed were many bark- or mat-covered houses. Apparently these works formed one of the most extensive Indian strongholds thus far known in New England.

The existence of the earthworks at Millis has been known to local archeologists for several years. They were visited by Professor Putnam, who made a sketch plan in 1887; a survey was made under the auspices of the Peabody Museum, by A. D. Wyman in 1903;

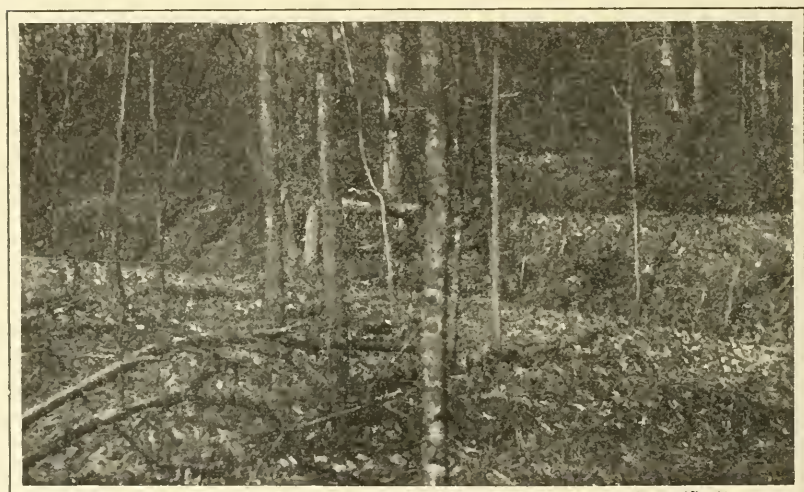


FIG. 88.—Millis: Southern portion of embankment and trench over hill between areas 1 and 2, below *e-f*, fig. 86, looking east.

and a model which forms the basis of figure 86 was prepared by the writer in 1909.

Sections of other embankments of a character similar to those described above have been brought to the writer's attention from time to time, some of which are undoubtedly portions of Indian strongholds; but generally not enough remains to give a comprehensive idea of the form and extent of the enclosures. Mr Warren K. Moorehead, of the Phillips Academy Museum of Andover, has recently called attention to several earthworks in that town.

Portions of these have been obliterated by cultivation, but enough remains to show some of them to have been extensive.¹

During the early colonial period there were numerous fortified enclosures or Indian forts in various sections of New England. The later ones were abandoned at or about the time of Philip's war. Roger Williams says that "with friendly joyning"² the Indians built their forts; that is, the men of a community and their friends took part in the work, which was probably accompanied by feasts and dances. The historic stockades were usually circular



FIG. 89.—Millis: Embankment and trench at southern side of area 2, looking south-east from n, fig. 86.

or square and enclosed areas about 50 feet in diameter to about 4 acres in extent. The more important references to historic Indian fortifications in New England follow, and, while the descriptions fail to give many desirable details, they furnish a good general idea of these strongholds, which were similar to the forts of the Algonquians of Virginia and the Middle States figured by John White and by Van der Donck.

¹ Since the above was written, the Department of Archaeology of Phillips Academy, Andover, Massachusetts, has issued *Bulletin V*, which consists of a well illustrated paper by Mr. Moorehead describing these earthworks.

² Roger Williams, *Key into the Language of America*, *Rhode Island Hist. Soc. Coll.*, vol. 1, p. 92.

The first account is by Champlain and refers to a fort on the right bank of the Saco River near its mouth. He figures a square enclosure containing a single house.¹

"The savages dwell permanently in this place and have a large cabin surrounded by palisades made of rather large trees placed by the side of each other in which they take refuge when their enemies make war upon them."

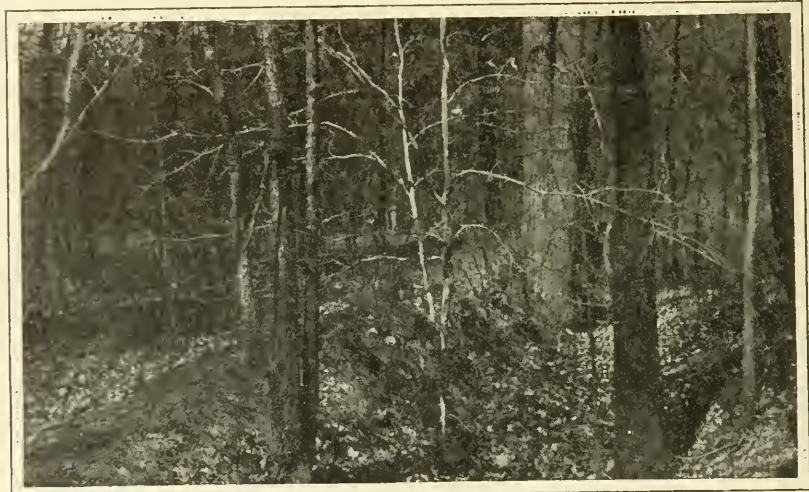


FIG. 90.—Millis: Embankment and trench at western side of area 4, looking north from near g-h, fig. 86.

The first fortifications seen by the Pilgrims were at Cape Cod. The remains of an old fort or palisade was found near the mouth of Pamet River, at Truro,² which they attributed to Christians, being without knowledge of Indian works of this nature. Farther south on the cape, below Wellsfleet bay, what appears to have been a second fort was encountered. This had evidently been abandoned at the time of the epidemic which prevailed in eastern Massachusetts a few years previous to the arrival of the Pilgrims. The dead were buried both within and without the enclosure. Within the enclosure were frames of houses, the coverings of which had been

¹ Champlain, *Voyages* (Prince Society), vol. II, p. 67.

² *Mourt's Relation* (Dexter edition), p. 22.

removed and carried away. The Pilgrims naturally mistook this for a palisaded cemetery, and thus described it:¹

"We found a great burying place, one part whereof was encompassed with a large Palazado, like a Church-yard, with yong spires foure or five yards long, set as close one by another as they could two or three foot in the ground, within it was full of Graves, some bigger, and some lesse, some were also paled about, & others had like an Indian house made over them, but not matted: those Graves were more sumptuous than those at Corne-hill, yet we digged none of them up, but onely viewed them, and went our way; without the Palazado were graves also, but not so costly."

The following autumn the Pilgrims discovered two small forts near the present site of Boston. These are described as follows:²

"Not farre from hence in a bottome, wee came to a Fort built by their deceased King, the manner thus; There were pools some thirtie or fortie foote long, stucke in the ground as thicke as they could be set one by another, and with these they inclosed a ring some forty or fifty foote over. A trench breast high was digged on each side; one way there was to goe into it with a bridge; in the midst of this Pallizado stood the frame of an house, wherein being dead he laid buried. About a myle from hence, we came to such another, but seated on the top of an hill: here *Nanepashemet* was killed, none dwelling in it since the time of his death."

The height of the palisades as given above, 30 or 40 feet, is probably too great. The trench, "breast heigh," measuring probably from its bottom to the top of the embankment which supported the palisades, corresponds very closely to those shown in figures 87-90.

Wood writes:

"These Forts some be fortie or fiftie foote square, erected of young timber trees, ten or twelve foote high, rammed into the ground, with undermining within, the earth being cast up for their shelter against the dischargements of there enemies, having loopeholes to send out their winged messengers."³

Vincent's account⁴ is drawn largely from Wood's, but, as he

¹ Ibid., p. 49.

² Ibid., pp. 127-128.

³ William Wood, *New England's Prospect*, Boynton edition, p. 89.

⁴ Vincent's narrative in Orr's *History of the Pequot War*, p. 105.

was one of the party that attacked the Pequot fort near Mystic, Connecticut, to which he has reference, his account is of value as it supplements that of Wood:

"They choose a piece of ground, dry and of the best advantage, forty or fifty foot square (but this was at least two acres of ground). Here they pitch, close together as they can young trees and half trees as thick as a man's thigh or the calf of his leg. Ten or twelve feet high they are above the ground and within [the ground] rammed three foot deep with undermining, the earth being cast up for their better shelter against the enemy's dischargements. Betwixt these palisadoes are divers loopholes, through which they let fly their winged messengers. The door is for the most part entered sideways which they stop with bows and bushes as need requireth. The space therein is full of wigwams, wherein their wives and children live with them."

The palisades were set close together, but open spaces between logs not perfectly straight were unavoidable. These open spaces were probably used as loopholes. Underhill,¹ describing the same structure, says:

"This fort or palisado was well nigh an acre of ground which was surrounded with trees and half trees, set into the ground three feet deep, and fastened close one to another, as you may see more clearly described in the figure of it before the book."

The illustration referred to, which appears in Underhill's *News From America* (1638), was evidently made by a wood engraver from a rough ground plan. It is of little value except as showing the fort to have been circular, with two entrances, one upon either side, each formed by overlapping the ends of the stockade, leaving a passageway between them. This fort is said to have contained about 60 or 70 wigwams.

Gookin says that at Natick "there was a handsome large fort, of a round figure, palisaded with trees."² The fort at Penobscot was 70 feet long and 50 feet broad and within it were 23 wigwams.³ Philip's fort, the site of which is at South Kingston, Rhode Island,

¹ Underhill's narrative in Orr's *History of the Pequot War*, p. 78, note.

² Gookin's Historical Collections, *Mass. Hist. Coll.*, first series, vol. 1, p. 181.

³ Drake's *Indian Wars*, p. 325.

had "besides high palisades, an immense hedge of fallen trees of nearly a rod in thickness, surrounding it, encompassing an area of about five acres."¹ It is said to have contained about 500 wigwams. Another estimate gives the size of the enclosure at 3 to 4 acres.²

A few instances are recorded of the apparent use by Algonquians of a trench and embankment without palisades as a defensive work under circumstances which probably rendered the erection of a stockade unpracticable. Two traditions current in past years among the New England Indians are as follows: A party of Nipmuc entrenched themselves on the shore of Quinebaug River against the Narraganset, where they remained three days. Fifty years ago these earthworks were visible (De Forrest, *Indians of Connecticut*, p. 268). We are also told (Mass. Hist. Coll., 3d series, vol. VI, p. 197) that a company of Mohegan invaded Block Island and were driven to a bluff, where they "by some means dug a trench around them toward the land, to defend them against the arrows of their enemies." This earthwork was known locally as the Mohegan fort.

In all there are about twenty Indian forts mentioned by the early explorers and colonists of New England between the years 1605 and 1676, nearly all of which were in Massachusetts (including the province of Maine) and Connecticut. It seems evident from a study of the above accounts that the old earthworks described in this paper are the remains of Indian fortifications of the same general kind as those seen by the colonists. The one at Millis is of greater extent and its form is composite; the embankments and trenches, however, appear to be identical with historic examples.

The levelling by cultivation of portions of certain other earthworks in eastern Massachusetts, renders it difficult if not impossible to determine their original form. Some of them were extensive, and may have formed enclosures as great as the one at Millis.

With our present knowledge, there seems to be no good reason for attributing these remains to other than Algonquian origin.

¹ S. G. Drake, *Indians of North America*, fifteenth edition, pp. 218-219.

² *Ibid.*, p. 218.

That this people occupied the greater portion of New England for a long period seems certain, for they were probably the originators of most of the shell-heaps of our coast. With the exception of the Champlain watershed in Vermont, and possibly certain other small sections of western New England, the Iroquoian tribes do not seem to have occupied these states. There are indications, however, of the occupancy of eastern, and perhaps central, New England by a non-pottery-making people, possibly the Beothuk, but there seems to be no evidence that the Beothuk constructed fortified enclosures of the types known to have been common among the Algonquians, although they did build extensive deer fences with "half-moon breast works" at intervals.¹ There are, doubtless, many embankments of the types described above in various sections of New England that are known but locally, and it is hoped that this brief account may prove an incentive to further investigation as to the distribution and origin of this class of remains in these states.

PEABODY MUSEUM OF HARVARD UNIVERSITY,
CAMBRIDGE, MASS.

¹ Rev. George Patterson, The Beothiks or Red Indians of Newfoundland, *Trans. Roy. Soc. Canada*, Sec. II, 1891, p. 133.

INCORPORATION AS A LINGUISTIC PROCESS

By A. L. KROEBER

DR Sapir's recent paper on "The Problem of Noun Incorporation in American Languages"¹ is such a masterly interpretation of the evidence connected with this subject, even though the essay is avowedly a refutation of the thesis advanced by the present writer a few years before,² to the effect that such incorporation is a chimæra, that it remains a cause of gratification to have taken the stand which has been productive of so novel and valuable a contribution.

One point of primary importance that Dr Sapir brings out clearly is the fact that noun incorporation has no necessary or inherent connection with pronominal incorporation, as it has been called, or "rather inflection," as he aptly designates it. Dr Sapir has gone farther than the writer in pointing out that there is rather an exclusion between the two processes, in that a pronominally incorporating language should find noun incorporation unnecessary, and *vice versa*; and even though, as he says, the facts do not entirely bear out this *a priori* consideration, it is nevertheless a conception of the greatest importance in the present state of our understanding of linguistic phenomena. The custom heretofore has been to assume that noun incorporation was merely a form or phase of pronoun incorporation, or even the reverse; and, as long as this view prevailed, there was no hope of a correct analysis of such evidence as was accumulating. In fact this assumption has been the cause of a persistent misunderstanding of the subject. That the present writer's argument, which was based on the contention that the assumed connection did not exist, overshot the mark and ended by doubting well-authenticated but unexplained facts that had been called noun incorporations, must perhaps be admitted. But this

¹ *American Anthropologist*, (N. S.), XIII, 250-282, 1911.

² *Verh. XVI. Intern. Amerikanisten-Kongr.*, Wien, 569-576, 1909.

is of little moment in comparison with Dr Sapir's agreement that such "noun incorporation" as he has been able to establish has nothing whatever to do with so called pronominal incorporation. Until this point of view is conceded, or proved erroneous, the evidence on the question will continue to be misunderstood.

Dr Sapir takes issue with the writer's definition of noun incorporation as "the combination into one word of the noun object and of the verb functioning as the predicate of a sentence," on the ground that a morphological and a syntactical requirement are joined: in other terms, that the definition exacts not only a certain type of word formation, as is justifiable, but also a logical relation between the elements, which is unreasonable. This criticism is correct, and it can only be said in palliation of the definition that, inasmuch as the phenomenon to which it relates was not believed to exist, less attention was given to theoretical exactness of statement than to an endeavor to express what had customarily been meant by the phrase "noun incorporation." In short, the basis of the definition was historical rather than logical. As a matter of fact, one of the arguments advanced against the existence of noun incorporation as thus defined was the circumstance that incorporation of the subject noun had not been alleged, but would have to be expected in at least some cases if object incorporation were at all common. Here again Dr Sapir maintains a most commendable conservative attitude, and, instead of using the apparent absence of one form of incorporation as an argument against the existence of the other, demonstrates the occurrence of both, together with still other phases, such as adverbial and predicative. This leads to a new conception: incorporation is no longer an essentially objective process, as had usually been assumed and as the writer accepted for purposes of refutation, but is non-syntactical in its nature. However the evidence on the question may in future be interpreted, this is a logical point that compels recognition.

Dr Sapir also gives the solution of the problem—which would have been puzzling if it had not been so generally ignored—why in alleged incorporating languages incorporation sometimes takes place and sometimes does not. As the writer put this point,¹ the

¹ *Op. cit.*, p. 574.

usual statement is to the effect that in a given language, such as Nahuatl, the object is often taken bodily into the verb, but "the 'more common' construction is to 'replace' the noun object by its pronominal equivalent. When and why it is usually replaced, and when not, are passed over. . . . An examination of analyzed Nahuatl texts shows occasional occurrences of what may be noun incorporation, but an infinitely greater number of instances of independence of the noun object. *Until a reason is given for these instances, there must be legitimate hesitation in accepting as true cases of incorporation the fewer possible or apparent instances of it.*"

This reason is now given, and with it falls one of the principal theoretical objections to the acceptance of the facts as hitherto stated. Starting with Nahuatl, but applying the same distinction also to other languages, Dr Sapir finds that true "noun incorporation" tends to occur chiefly in verbs of general or permanent, opposed to particular or temporary, application. This distinction was apparently first brought out by Dr W. Lehmann in an article published so shortly before the composition of the present author's essay as to have escaped his notice. Nahuatl can say either "I-it-eat the flesh" or "I-flesh-eat"; but the former sentence means "I am eating flesh," the latter "I am a flesh eater." Not only is there a distinction here, but it is an important and a reasonable one. The whole process rests on a point that at once appeals to linguistic sense, just as the old unlimited assertions did not. The difference between what is inherent and what is accidental has frequently been found to be expressed in various languages, as in the use of distinct sets of possessive pronominal elements. It is a difference of wide and often most significant value, and the only surprising feature concerning it in the present connection is that it has not been made clear previously. It may be added that the distinction is not entirely foreign even to English, which formally does not recognize it, in that agent nouns such as "eater," "runner," "trapper," "fighter," "cobbler," "drummer," are used habitually if not exclusively to denote occupation or customary action. It is probable that in some languages noun incorporation does not depend on any significance of permanent action or inherent*quality, but

at least there is now every prospect that in such cases the phenomenon will be found bound up with some idea or trait of analogous type. The road to explicit limiting conditions is at least pointed out.

Dr Sapir's use of Dr Lehmann's discovery and his application of it to other languages make clear another point. As the former says in conclusion: "The characteristic fact about the process [noun incorporation] is that certain syntactic relations are expressed by what in varying degree may be called composition or derivation." Here is the crux of the whole problem and its answer: *noun incorporation is not grammatical but etymological*. We ourselves say "flesh-eaters" and "ship-builders"; but, as these terms are collocations of one noun with another though deverbal noun, we do not and should not consider them as instances of noun incorporation in the verb. They are simply compound nouns.¹ Because we can not say "to flesh-eat"² and Nahuatl can, it is obvious that there is a most important point of difference between the two languages; but the fact nevertheless remains that there is a fundamental identity in that the terms expressing the ideas of flesh and of eating can be combined into a single word in both idioms by an etymological process.

The difference is that English, like other Aryan languages, freely permits compound nouns,³ but does not tolerate compound verbs,⁴ whereas Uto-Aztekan possesses both. This is rendered doubly clear by the occurrence in Paiute—as well as in other Shoshonean dialects, it may be added—of compounds consisting of two verbs and functioning as verbs. Such compounds have a

¹ The author says, page 570: "*Man-eater* is not incorporation but composition because *eater* is functionally a noun." When Dr Sapir, page 256, says: "'Man' + 'eater' is not morphologically equal to 'man-eat' + 'er'" he puts the same idea into a prettier and more exact form.

² Though "to housekeep" has some usage.

³ That is, compounds which contain at least one noun and which as a unit are nouns.

⁴ That is, compounds which contain at least one verb and as a unit are verbs. The only exception is furnished by combinations of preposition or allied adverbial element (such as the negative) with a verb: understand, offset, undo; and such are possibly derivative, if not semigrammatical, rather than compositional. If Aryan were an American Indian language, the elements in-, con-, de- would almost certainly be discussed in connection with grammar rather than formal etymology.

number of times been mentioned as occurring in other languages, and it is strange that they have not aroused more interest, as they are entirely unthinkable in those forms of speech in which their discoverers, and all philologists, thought and wrote. They now acquire an added significance, and it is reasonable to ask that the existence of "noun incorporation" be at least inquired into in those idioms that may be reported as possessing binary compound verbs: the two traits can be expected to go hand in hand in at least some other cases, perhaps customarily.

Carrying the idea still farther, to its logical opposite, we reach a condition such as is found in Iroquois, where noun incorporation, that is to say composition of noun and verb, is not only frequent but in some circumstances necessary, whereas the composition of two nouns into one noun is absolutely forbidden. This method of linguistic procedure is so radically different from our Indo-European one as to be startling.¹ But at least we need no longer hesitate at accepting the doctrine that such a highly synthetic language as Iroquois can not compound noun with noun, since we know that it must, in most cases, compound noun with verb.

In short, it is clear that four classes or types of languages must be recognized: those that permit compound nouns, but not compound verbs, such as Aryan; those that allow compound verbs but not nouns, such as Iroquois; those that permit both, such as Uto-Aztekan; and those that tolerate neither, as for instance Eskimo. Theoretically the distinction is an obvious one and has perhaps been made; but, as a general classification inductively arrived at, it does not seem to have been employed. Of course "noun incorporation" can not occur in languages of the first and fourth types. But conversely there will always be reason to suspect, until contrary evidence dispels the possibility in any particular case, that "noun incorporation" may be found in any language of the second or third classes.

This close relation of "noun incorporation" to purely composi-

¹ *Anthropos*, v, 215, 1910. The statement was originally made by J. N. B. Hewitt *American Anthropologist*, 1893, and is not contradicted by F. Boas, *Putnam Anniversary Volume*, 427-460, 1909.

tional processes tends further to stamp it as of an etymological nature. "Pronominal incorporation," on the other hand, will probably be admitted to be, as both Dr Sapir and the author hold, essentially grammatical or inflectional. This brings us back once more, and with added emphasis, to the primary thesis that the two processes have nothing to do with one another, and that their being brought into connection only obscures the understanding of each. It was said before¹ that "strictly, pronominal incorporation does not exist" and that it was only justifiable to employ the phrase on account of its established usage, if properly understood. The same statement can now be made of "noun incorporation." Accurately speaking, the noun is not "incorporated" into the verb, but compounded with it. One might just as well describe binary compound nouns in Greek or German as "incorporations" of one noun into another, because the second of the two elements retains case and number inflections and is treated in the sentence as if it were single, while the first element is reduced to stem-form. What is important is the fact that in some languages noun and verb, or verb and verb, can be compounded into a verb. This is as important and as striking as the fact that in many languages pronominal affixes or inflections are used with objective reference, instead of only subjectively, as in our own languages; but neither process is so radically diverse from processes perfectly familiar from these languages, that there is any necessity for designating it by a term intended to imply characteristics unparalleled and unrepresented in European speech. When Nahuatl prefixes to the verb the objective pronominal element, we have a trait that is not fundamentally or essentially of a different nature from the suffixion to the Latin verb of a subjective pronominal element. And just so, when the former language or Iroquois under certain conditions compounds a noun stem with a verb, we are confronted by a phenomenon of exactly the same type and order as when English or German compounds a noun stem with a noun.

In short, the term "incorporation" is a delusion, whether applied to pronoun or to noun. It must be relegated to the same cate-

¹ Op. cit., p. 571.

gory as other antiquated catch-words such as "agglutination," which like it originated in the assumption that the languages of so called uncivilized people must contain certain features of a kind totally different from those characteristic of Europeans—and incidentally too, features of an inferior order,—and which have found their chief vogue and employment not among serious painstaking students of language but among doctrinaires, compilers, and those false popularizers who think to diffuse knowledge by giving a phrase instead of an idea.

Dr Sapir's paper is invaluable. It shows exactly and precisely what takes place in a number of languages under those circumstances which have been designated as incorporations. If only two or three investigators of single languages had deployed on these the critical acumen and breadth of treatment with which he approaches half a dozen, the present question would long ago have been disposed of. It is also thankless to quarrel about names, especially as Dr Sapir has illumined the actual phenomena, above all in showing that they are essentially compositional. But just as his dissertation went beyond the writer's essay, it also seems to need supplementing. If "incorporation" is to be understood to denote only one phase of a long-familiar method of word building which differs from other phases of the same method not in any greater degree of "embodiment" but merely in affecting the verb instead of the noun, well and good: then there is incorporation. But if "noun incorporation" is to imply a process entirely peculiar and distinctive in kind, without parallel in our own languages, then "noun incorporation," like "pronominal incorporation," is a complete misconception of facts and a fallacy.

In fine, something that for better or worse has been called "noun incorporation," and which in precisely the same form does not occur in European languages, is to be found in certain American tongues; but, barring the particular application of the process, there is nothing in it that is not present in all languages that compound in any way. Just as every language except the completely analytical ones "agglutinates" if there is such a thing as "agglutination" at all, so every language "incorporates" or com-

pounds. It is thoroughly misleading to designate the same process respectively "composition" and "incorporation" according as one has in mind his own or other forms of speech. Some day philologists will approach their profession not with the assumption that languages must differ in kind or in being relatively better or worse, but with the assumption that exactly the same fundamental processes run through them all, and with the realization that it is only by starting from the conception of their essential unity of type and method that their interesting and important diversities can be understood.

The conclusions of the foregoing discussion can be summarized as follows:

1. "Pronominal incorporation" and "noun incorporation" are different and not connected.
2. "Pronominal incorporation" is a grammatical or inflectional process.
3. "Noun incorporation" is, at least sometimes and perhaps always, a compositional or etymological process, which differs from the familiar process of noun composition only in resulting in words of another part of speech.
4. All languages belong to one of four classes according as they form compound nouns, compound verbs, both, or neither.
5. There is no evidence of the existence of any kind of "incorporation" that so far as its process or method is concerned is different from processes occurring in European languages, and it is more reasonable to assume that there can be no such difference than that there must be.

UNIVERSITY OF CALIFORNIA,
MUSEUM OF ANTHROPOLOGY,
AFFILIATED COLLEGES, SAN FRANCISCO.

A NEW FEATURE IN THE ARCHEOLOGY OF THE MISSOURI VALLEY IN NORTH DAKOTA

By GEORGE F. WILL

SOME time ago in an article on "Some New Missouri River Valley sites in North Dakota," which appeared in the *Anthropologist* for January-March, 1910 (pp. 58-60), the writer mentioned some mounds on Apple Creek near the Norman Falconer place. Of these mounds a more careful survey has since been made, as also of the hills across the creek to the south. This paper gives the details which were collected.

An accompanying rough map (fig. 91) is intended merely to give an idea of the main features, and the mounds are somewhat exaggerated in size. The locations are approximate as the survey was not made with instruments. The mounds are marked with letters. The irregular line making a point, upon which the mounds are mainly seen, is the line marking the slope where the bench land drops away to the river bottom. Apple Creek is seen flowing close to the edge of the bench on the east.

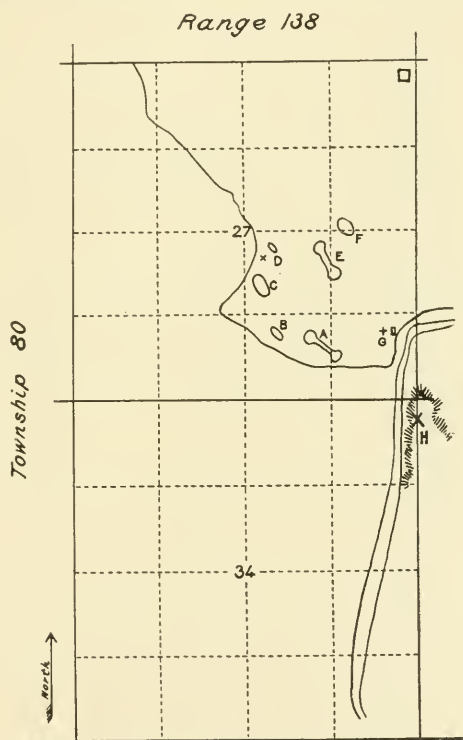


FIG. 91.—Map showing location of mounds on Apple Creek, North Dakota.

These mounds have been known historically for many years. Upon the point where they are located part of General Sibley's command was engaged with the Sioux for several days. Along the edge of the slope can still be distinguished lines of rifle pits which the soldiers dug at that time. Among the soldiers in this fight was the late Mr Brower, long connected with the Minnesota Historical Society. He afterward told Mr Steinbrueck of Mandan, N. D., that he had seen several mounds here at the time of the battle, and that they seemed to be quite different from the mounds found around the Mandan and other village sites in the vicinity. In the top of the mound marked *F* there is a grave in which Mr Angus Falconer states that one of Sibley's soldiers was buried.

The land upon which the mounds are found, with the exception of that part where mounds *A* and *B* are located, has been cultivated for many years. Consequently the mounds are fast being effaced. In the field with the mounds several other things of interest have been found. At the point marked *G* a cache or pocket of chipped flint was found about three years ago. Arrowheads have also been picked up frequently in plowing the field.

Mr Falconer states that for many years no pottery at all was found in the neighborhood. About a year ago, however, several fragments were picked up at a point near mound *D* on the map, close to the edge of the bench. The pottery found consists of three small pieces, all apparently from the same vessel. It is of the type usually found in the region, but of the coarsest and least burnt sort, of considerable thickness and showing no decoration. So far as could be ascertained this is the only pottery ever found hereabouts. This surprising scarcity of pottery seems to differentiate this site from any of the village sites, where pottery always occurs in immense quantities.

Very little excavation has been done on the mounds. The writer removed considerable earth on the east end of mound *B* but found nothing of human workmanship. The earth contained rather more pebbles and small stones than the surrounding soil, otherwise it was the same.

It should be noted that the mounds are of two forms, four being

almost circular, a trifle longer than they are wide. The other two are much longer and narrower, and seem to consist of two small circular mounds connected by a long, narrow bank. The mounds uniformly lie in a northwest to southeast direction, though not pointing exactly alike.

The dimensions of the mounds were taken and will here be set down. Mound *A* is 229 feet long, about 40 feet in diameter at the ends, and 20 feet along the connecting ridge. Mound *B* is 55 feet long and 30 feet wide. Mound *C* is nearly round with a diameter of 92 feet. Mound *D* is also nearly round with a diameter of 20 feet, this being the smallest mound. Mound *E* is by far the largest. The diameter of the round, end mounds is approximately 50 feet, while that of the connecting mound is 30 feet. The total length of this mound is 375 feet. There is a small depression on either side of mound *D* as though earth had been taken out to build the mound. Mound *F* is nearly round with a diameter of 67 feet. The mounds are all rather low, the average height being not more than 3 or 4 feet. It is probable however that before the land was cultivated the height was considerably greater. None of the above measurements could be called absolutely accurate for the reason that it is very difficult to determine absolutely just where the mound joins the surrounding level; they are, however, as nearly accurate as possible.

Across the creek on the hills to the south and southeast there are also several noteworthy features. On the point of a high hill directly overlooking the creek and the mounds, at a spot marked *X* on the map, a number of bones were found, partially uncovered by the action of the weather. They had apparently been interred in a bundle, though this could not be determined certainly. Mr Angus Falconer states that at the same point several human skulls were exhumed some fifteen years ago. The bones found were identified as part of a child's skeleton.

Northeast of the hill where these bones were found and on another high hill not shown on the map, at a distance from it of about half a mile, is another mound. This mound is very low and very indistinctly defined. It lies in a northwest to southeast di-

rection on the flat top of the hill, and far exceeds the other mounds north of the creek in size. Its length is 540 feet and its width about 50 feet. There is no apparent increase in the width at the ends.

These mounds seem to be a new feature in the archeology of the Missouri River region, or at least of that part of it in the vicinity of Bismarck, N. D. They differ widely from the usual village-site mounds, both in the lack of artifacts in the earth of which they are composed and in the general orientation. There are no traces of debris or refuse, nor of house rings, in the vicinity, and, as before stated, pottery is almost entirely absent. Whether they are the product of a different people from the village builders, or merely an unusual and seldom encountered form of the work of the latter is difficult to decide. They are certainly quite as old and perhaps older than the village sites found in the region. A careful and complete excavation of one of the mounds might throw some light on their purpose and uses, and help solve the question as to who built them. Without such an exploration these questions can not be satisfactorily answered.

BISMARCK, N. D.

EXOAMY AND TOTEMISM DEFINED: A REJOINDER

BY A. A. GOLDENWEISER

IT may be deemed unfair to find fault with a review as appreciative as Dr Lowie's examination of my paper on *Totemism* but I trust he will realize that the following remarks are not made in the interests of the writer but for the sake of future totemic discussion.

Dr Lowie takes exception to what he calls my conception of exogamy. He clings to the accepted use of the term "exogamy" as "the rule against members of a group marrying among themselves—in other words, the rule of the incest group."¹ If this definition be adopted "then exogamy may be ascribed to any group prohibiting marriage among its members. In this case, the exogamy of the Kamilaroi class, as well as the exogamy of the Arábana clan, is a derivative feature,—a logical consequence of phratric exogamy. In addition to this derivative (and therefore relatively unimportant) exogamic trait, the Kamilaroi class and the Arábana clan have certain positive marriage-regulating functions, which, however, have nothing to do with exogamy, of which the functions are only prohibitory."² If, on the other hand, my conception of exogamy be adopted—"an exogamous relation is fully represented only when both the group within which marriage is prohibited, and the one into which it is permitted or prescribed are given"³—then "the mutual relationship of intermarrying classes with rules against intra-class marriage would form the standard illustration of exogamy; phratries would formally, but for reasons just given, might *only* formally, exemplify exogamy; and it would be inadmissible to speak glibly of four exogamous Tsimshian clans, of a great number of exogamous Khasi clans, of fourteen exogamous Bahima clans

¹ *American Anthropologist*, April-June, 1911, p. 196.

² *Ibid.*, p. 197.

³ *Ibid.*, p. 196.

and forty-one exogamous septs."¹ Dr Lowie particularly insists that wherever we have only two exogamous intermarrying groups the positive marriage-regulation need not, although it may, be a psychological factor; for in such cases, whether there be any positive regulation or not, "intermarriage follows as a physical necessity; the group into which marriage is permitted or prescribed is determined by the mere statement of the prohibitory regulations."²

On page 237³ of my article on totemism,⁴ I write: "Exogamy, of course, literally, means 'marriage without or outside of' (a certain group)—an imperative which has its negative correlate in the prohibition of marriage within the group." This statement is somewhat misleading for, contrary to the etymological connotation of the term, it is the prohibitory aspect of exogamy which is emphasized in current usage, as Dr Lowie correctly notes. Throughout my paper, however, I stick to this customary use of the term (see, *e. g.*, page 187 with reference to the Tsimshian; page 231 with reference to the Khasis, Meitheis, Mikirs, Nandi, Gros Ventres, etc.; page 236 with reference to the Todas; etc.).

This use of the term "exogamy" does not, however, compel us to regard the exogamy of the Kamilaroi class or the Arábana clan as a derivative feature, "a logical consequence of phratric exogamy." From the genetic point of view Dr Lowie may be right; the class and the clan in the above instances may have been exogamous as parts of phratries before they themselves became marriage-regulating units. But speaking psychologically—and, Dr Lowie will admit, we must here speak psychologically—the marriage prohibition within the Kamilaroi class and the Arábana clan is an independent, not a derivative, feature. Internal evidence apart, this follows from the function of these groups as social units into which marriage is prescribed. Negative marriage regulation does not involve definite, positive marriage regulation: an incest group may have the most varying positive marital rights. The reverse, however, is not true; positive marriage regulation deter-

¹ *Op. cit.*, pp. 196-197.

² *Ibid.*, p. 196.

³ To find corresponding page of the reprint, subtract 178.

⁴ *Journal of American Folk-Lore*, April-June, 1910.

mines definite negative marriage regulation, for the prescription for all members of a group to marry into another equivalent group, and *vice versa*, carries with it as a *psychological* correlate the prohibition of marrying within the group. To speak of positive marriage-regulating functions as having "nothing to do with exogamy, of which the functions are only prohibitory," is to close one's eyes on the facts. This is no longer a matter of terminology. Positive and negative marriage regulations, as we find them in innumerable communities, are most intimately correlated. This is conspicuously true of those instances in which marriage is regulated by degrees of relationship, as in Central Australia, among the Toda, the Gilyak, etc. To definite relationship groups within which marriage is prohibited correspond definite relationship groups into which marriage is prescribed. From these are sharply differentiated those groups within which marriage is simply approved of or disapproved of. The correlation between these negative and positive regulations is scarcely less complete in the case of two intermarrying phratries or classes, as in British Columbia, in ancient times probably among the Iroquois and many Siouan and Algonkin tribes, in wide cultural districts of Australia and Melanesia. Of course, we must admit as a logical possibility Dr Lowie's point that, whenever we have merely two intermarrying groups, they "might *only* formally exemplify exogamy" for in such cases "intermarriage follows as a physical necessity." I doubt, however, whether this logical possibility is ever realized. Without here furnishing the evidence, I contend that in Australia as well as in Melanesia the positive regulation would, on inspection, be found to be a psychological factor in the marriages of the two moieties, just as it is among the Haida where the two "sides" "show respect" to each other by intermarrying. Finally, in such cases as are presented by the Toda clans, or the Indian gotras, or, in North America, by the clans of the Indian tribes of the Southwest, each exogamous group may marry into any of the others. Only in the latter instances is the positive side, as a psychological factor, either vague or absent. To this I should like to add, for the present merely as a suggestion, that the numerous instances of progressive

extension of marriage regulations (see *Totemism*, pp. 243-5), may perhaps be conceived as a general tendency for relatively indefinite marriage regulations to become definite and standardized.

I feel that the terms "exogamous relation" and "exogamous unit," as used in my article, do not suffice to cover the concepts involved in the various phases of marriage regulations. It may not be out of place to submit here a few terms and definitions.

A group which does not marry within itself is *exogamous*.

If a group is exogamous in its own right, it is an *exogamous unit*.¹

An exogamous unit of which only the prohibitive functions are in evidence, is a *negative exogamous unit*. If the positive regulations are also defined the group is a *definite exogamous unit*.²

Intermarrying exogamous groups stand to each other in an *exogamous relation*.

If the positive regulations are vague or absent, we have an *indefinite exogamous relation*. If the negative and positive regulations are fixed, we have a *definite exogamous relation*.

If a group is not exogamous in its own right, its exogamy is *derivative*.

The following self-explanatory terms may also prove useful: *positive and negative marriage regulations*, or *matrimonial restrictions* and *matrimonial prescriptions*.

Dr Lowie's second stricture refers to my definition of totemism as a process of specific socialization. Says Dr. Lowie: "He does not merely hold that totemism is the result of a secondary association of social units with various factors. He holds in addition, that the association resulted from the fact that objects and symbols which were originally of emotional value only to individuals became, through descent, values for definite social groups."³ Having thus put before the reader my conception of totemism as expressed in the definition, Dr Lowie asks two questions: "In how far does it accurately represent the phenomena commonly designated as totemic? And, to what extent does it represent the totality of phenomena which seem psychologically and sociologically related

¹ In this sense the term is used in *Totemism*, p. 237.

² This term corresponds to "exogamous unit" in my *Totemism*, except on p. 237.

³ *Ibid.*, p. 203.

with these totemic phenomena?"¹ I shall not here attempt to answer the second query, beyond noting that I am inclined to agree with Dr Lowie's remarks on the relation between totemic phenomena and religious societies. However, as I intend in due time to deal with this subject at some length, I prefer to leave the question open for the present. The first query Dr Lowie answers in the negative; my definition does not accurately represent totemic phenomena for, although "it must be admitted that the author's definition outlines a plausible course of development, . . . it is possible to conceive that conditions other than those defined by Dr Goldenweiser may lead to typical totemism."² "What evidence is there," protests my critic, "to show that among the Iroquois the clan name was originally an individual possession which, through descent, became socialized?" And again, "If we assume the association of name and social group as the starting point of totemism, and, as the author himself has shown, this combination sometimes exhausts the content of totemism, it is, in our ignorance of the actual history of the development, impossible either to prove or to refute the theory that the group names, not only in the Iroquois, but in the Australian cases as well, ever served to designate individuals."³ The same reasoning would apply to taboos. In a word, socialization as a factor in totemic associations, is not a *Denknotwendigkeit*. "The critic is therefore of opinion," he concludes, "that a non-committal attitude on the process of association (so far as it eludes observation) is highly advisable. Totemism would then be defined, not as a *socialization* of various elements of (at least potentially) emotional value, but merely as the *association* of such elements with social groups."⁴

It is unfortunate that Dr Lowie should have misunderstood me on this point. I do not hold the view of socialization he attributes to me, nor was I in the least aware when defining totemism as a process of specific socialization, of propounding a theory of the origin of totemism.

¹ *Totemism*, p. 204.

² *Ibid.*

³ *Ibid.*

⁴ *Ibid.*, p. 205.

Again, Dr Lowie's error may be due to a vagueness of statement on my part. The words "objects and symbols which are originally of emotional value for individuals become through their totemic association transformed into social factors, referring to social units which are clearly defined,"¹ may be misleading. However, Dr Lowie could not possibly have misunderstood my statements on page 271. "The intimacy of the above associations could never become so absolute if not for the fact that the various elements, religious, aesthetic, ceremonial, and what not, become linked with definite social units (say, the clans), of which they henceforth become the prerogatives and symbols. This association with social units is what constitutes the peculiarity of totemic combinations. *Elements which are per se indifferent or vague in their social bearings*,² such as dances, songs, carvings, rituals, names, etc., become associated with clearly defined social groups, and, by virtue of such association, themselves become transformed into social values, not merely intensified in degree, but definite and specific in character."³ The process is somewhat further elaborated in the following paragraph. Now this transformation into definite social values is what I call *specific socialization*. I also say: "The one obvious and important means by which the association with definite social groups is accomplished is *descent*."⁴ And my conception of the function of descent in this connection appears from the following sentence: "In clan totemism we start with a social group which in some way has acquired a totem, whether it be a worshipped or tabooed animal or plant, or merely a name [*cf.* Dr Lowie's own hypothetical instance on page 204 of his review]. Descent becomes henceforth a factor which tends to perpetuate the totemic clan as a social unit, as well as to consolidate it with those other elements which may from time to time become associated with it." And again: "In clan totemism, then, the social group is, for totemic purposes, the starting point."⁵

¹ *Totemism*, p. 275.

² In the original these words are not italicized.

³ *Totemism*, p. 271.

⁴ *Ibid.*, p. 271.

⁵ *Ibid.*, p. 272.

It is very curious that Dr Lowie represents me as holding that my definition of totemism is based on assumptions such as that the clan names of the Iroquois or Australians designated individuals before they were applied to social groups, etc. This, of course, is the theory of the origin of totemism held by Hill-Tout, only that he starts, not with an individual taboo, or name, but with an individual guardian spirit. Dr Lowie has read my refutation of this theory,¹ of which Frazer's *conceptional* totemism is a variant. I admit the possibility of such development, although there can be little doubt that, if origins were laid bare, the social group would in a great majority of cases be found at the very inception of the totemic process. One road to totemism may lead over the individual taboo, name, or guardian spirit, but it has not been an oft trodden road.

All this by the way, however, for, as I stated before, my definition of totemism does not involve *any* theory as to the origin of the institution. The connotations of the term "socialization," as used in the definition, are primarily psychological, not genetic. Dr Lowie seems to agree with the first definition in which the process is described from the point of view of the social units. Now, in the second and third definitions, I merely attempt to express the process in psychological terms, using the "emotional values" as the starting point. No new elements, or concepts, or hypotheses, are added. Social units become associated with objects of emotional value, or the objects become associated with social units, become *socialized*. As the social units are sharply defined, the socialization is *specific*. To take Dr Lowie's schematic example. Group *A* and group *B* have each certain taboos. The groups combine. Have we totemism? Not necessarily. For the result may be simply a larger group *C*, some of the members of which observe the taboos of former group *A*, others the taboos of group *B*. But *A* and *B* may combine while preserving their identity. They may thus become definite social units (say, clans) and the taboos, if practiced by the clans as social units, would then be *socialized* within the clans, forming the nucleus of a totemic community.

¹ *Totemism*, pp. 268-9.

But there is really no need of such hypothetical constructions, for the term "socialization" is nothing but a description in psychological terms of what we actually find in totemic communities. The totem, as well as the concomitant beliefs, ceremonies, artistic representations, etc., are in totemic groups, always *socialized* within the social units to which they refer; they are their prerogatives, or symbols. Such a condition can not be regarded as primary; the specific socialization of a belief or practice is, of course, a psychological process in the minds of the individuals constituting the social unit. In the formative period of a totemic complex, this process must proceed for some time (say, several generations) before the new psycho-sociological relation becomes a fixed factor in the social consciousness of the group, although in a developed totemic community the time necessary for the socialization of a new totemic feature may be very brief indeed. In so far, then, as the connection between the socialized object and the social unit, while "in the making," must be conceived as a process, but only in so far, the term "socialization" is not merely psychologically descriptive but also genetic.

I should like to add a few words as to the application of the concept of convergent evolution to totemic phenomena. I think I have shown, as Dr Lowie insists, that totemic complexes must be regarded as the product of convergent evolution. On the other hand, all totemic complexes are genetically determined and psychologically constituted by the fact that the component social units of the complexes become *associated* with the various totemic features, or that the totemic features become *socialized* within the limits of the social units. This functional factor in all totemic complexes, whether we call it totemism or not, seems to be a constant. Moreover, it can not itself be conceived as a product of convergent evolution, but seems to be a primary socio-psychological fact.

This interpretation does not militate against the conception of totemic complexes as products of convergent developments. On the contrary, it brings the conception into relief by suggesting that the tendency to specific socialization reduces to a common denomi-

nator the heterogeneous ethnic factors that go to the making of a totemic complex, by bringing them into that intimate relation with social units which is so characteristic of totemic communities.

In closing I want to join Dr Lowie in his final estimate of my work. My study was "not definitive, but programmatic." I have merely, "given a statement of first principles . . . The next step must be a more extensive ethnographic investigation of the field."¹

COLUMBIA UNIVERSITY,
NEW YORK CITY.

¹ *Totemism*, p. 206.

BOOK REVIEWS

Primitive Paternity, the Myth of Supernatural Birth in relation to the History of the Family. BY EDWIN SIDNEY HARTLAND. Vol. I (1909), pp. viii+325; vol. II (1910), pp. 328.

British anthropologists write so much and so well, that we, their American colleagues, are kept busy reviewing them. When the author of *The Legend of Perseus*, one who as folklorist and totemist ranks among the first, writes a book on *Primitive Paternity*, our attention is aroused and our anticipation kindled.

The author opens his argument by presenting a well-selected set of myths of supernatural birth, *i. e.*, of "birth without sexual intercourse, and as the result of impregnation by means which we now know to be impossible" (I, p. 2). We read stories of impregnation by eating and drinking; of conception through stones or the consumption of a portion of a corpse; of children born from the wind, the rain, or the rays of the sun, etc. Having tasted of legend and myth, we follow the author through a maze of picturesque customs and beliefs which indicate that mythological fancy became reality in the innumerable devices for artificial impregnation which have been used in antiquity and continue to be used by modern savages and peasants (I, pp. 30-155).

The beliefs in supernatural birth or asexual conception are so widespread that they must evidently have existed from the remotest antiquity and must have sprung from some basic characteristic of primitive mentality. This the author finds in the primitive view of nature in which no sharp line was drawn between man, animal, plant, and stone, and transformations from one natural kingdom to another were of every day occurrence. Ninety-seven pages are devoted to a discussion of such beliefs in transformation, where, through death and rebirth or in some other way, man becomes an animal, stone, or plant, or *vice versa*.

Here the argument takes an unexpected turn, and we find ourselves confronted with the problem of mother-right. "During many ages" says Hartland, "the social organization of mankind would not have necessitated the concentration of thought on the problem of paternity" (I, p. 256). Such a type of social organization is found in mother-right, a state of society which must once have been universal for "the result of anthropological investigations during the past half century has been

to show that mother-right everywhere preceded father-right and the reckoning of descent in the modern civilized fashion through both parents" (I, pp. 256-257).

In the course of his characterization of the social conditions of mother-right the author lays some stress on the belief in blood-kinship between the members of the matriarchal clan, based on real or imaginary descent or, in later periods, acquired through an artificial rite of adoption into the clan. The importance of the bond of blood, female descent, and the usual concomitant, exogamy, bring it about that the father is not recognized as belonging to the kin of his children and, consequently, small account is taken of him in the life of the family (I, pp. 261-2). Further, the children of the same father but different mothers are not reckoned as brothers and sisters (I, p. 264). In case of strife between clans, children may take up arms against their father (I, p. 269). When a crime is perpetrated on a woman or other injustice is done her, the duty of assistance or revenge does not fall on her husband but on her blood-relations (I, pp. 273 *sq.*). The wife's brother has far more authority over her children than has their own father (I, pp. 285 *sq.*). Having thus sketched the social organization of mother-right, the author vigorously repudiates the oft made conjecture that the practice of counting descent through the mother is due to uncertainty of paternity. He takes pains to show that "mother-right then is found not merely where paternity is uncertain, but also where it is practically certain. Father-right on the other hand is found not merely where paternity is certain, but also where it is uncertain and even where the legal father is known not to have begotten the children" (I, p. 325). Needless to say, all of the above propositions are substantiated by a long list of ethnographic examples (I, pp. 253-325).

In the pages that follow the author attempts to trace in a general way the rise of father-right. At first the husband resides in the wife's family or visits her secretly. When the wife's relatives become more particular as to the parentage of the children, the husband's visits must be tacitly approved by the relatives of the couple, although formal secrecy may still be maintained. Gradually the husband tends to become the head of the household, and begins to remove the wife to his home. The removal of the wife to the husband's home is one of the important factors in the rise of father-right. As the practice becomes perpetuated a feeling of solidarity and strength arises between the males of the local group; the son is less willing to raise his arm against the father in protection of his mother's interests (II, p. 97). Another factor is the

breaking up of large groups into smaller units with strong males as heads and protectors (II, pp. 94-95). Under mother-right, children are, on the death of the father, deprived of the advantages derived during his lifetime from sharing in his material possessions. With the rise of economic values, children become less willing to submit to these drawbacks of their maternal affiliations, and in this they are supported by the growing desire on the part of the father to provide for the perpetuation of his hearth (II, p. 98).

Among peoples who count descent through the father we often find customs which can be interpreted only as survivals from an earlier stage of mother-right. The bride may be temporarily retained at her parents' home (II, pp. 15, 16, 55, 56); or she may follow her husband to his house but return to her parents and invite him to visit her (II, p. 21); finally, the young man, before he is permitted to marry, may be required to spend a period of probation at the house of his future father-in-law, assisting him in his work or simply courting the bride-to-be (II, p. 48); etc.

Thus the author arrives at the conclusion that father-right is not, like mother-right, a natural system based on blood relationship, but a social convention, which is rooted in specific social and economic conditions (II, pp. 1-100). In this, as in previous chapters, numerous examples are adduced, to substantiate the argument.

In the following chapter, the longest in the book (II, p. 101-248), the author undertakes an extended examination of the sexual relations of primitive peoples, in the attempt to further justify his contention that father-right "has in its origin at all events, nothing whatever to do with the consciousness of blood relationship" (II, p. 101). The author's principal positions are the following. Among primitive peoples sexual laxity of both sexes is common; promiscuous sexual intercourse is indulged in by unmarried girls and, to a somewhat lesser extent, by married women; female chastity is not valued; in fact, an impressive love-record is often put to the credit of the girl or the married woman; jealousy, in our sense, can scarcely be said to exist; if it appears at all it is based rather on property rights than on any sentimental considerations; actual paternity is a matter of indifference; such indifference is fostered, in many instances, by a dominant desire for children which furthers the development of fictitious parenthood. This brings us to the final summing up. "Thus father-right, far from being founded on certainty of paternity, positively fosters indifference, and if it does not promote fraud at least becomes a hotbed of legal fictions. It is a purely artificial system" (II, p. 248).

Correlating the facts disclosed in the last chapter with the beliefs in extra-sexual conception dwelt on in the opening sections of the book, the author concludes "that not merely is actual paternity of small account but, strange as it may seem, it is even not understood" (II, p. 250). And again "What I do mean is that for generations and æons the truth that a child is only born in consequence of an act of sexual union, that the birth of a child is the natural consequence of such an act performed in favouring circumstances, and that every child must be the result of such an act and of no other cause, was not realized by mankind, that down to the present day it is imperfectly realized by some peoples, and there are still others among whom it is unknown" (II, p. 250). Indeed, many causes may be adduced why the discovery of the natural order of things should have been retarded. In primitive conditions all women are accustomed to sexual intercourse from an early age but not all women bear children (II, p. 253). Premature intercourse or intercourse at an age past child-bearing is not followed by child birth (II, pp. 253-272), etc. When finally the true cause of birth was discovered, beliefs in the efficiency of other means of impregnation lingered on among many peoples (II, p. 274). The familiar Australian evidence on "ignorance of conception" is here adduced, followed by one or two instances from other tribes (II, pp. 274-281).

We need not with the author recapitulate his argument. It is hardly necessary to add that *Primitive Paternity* makes throughout interesting and instructive reading, and is written in a style that is rich and pleasing; while the author's eccentricities in punctuation are always amusing though at times puzzling. But what as to his argument and conclusions?

To begin at the end. When, in the last chapter of the book, the author makes the statement that at one time all mankind was ignorant of the true nature of conception, one can not but agree with him. The proposition is indeed obvious and must be accepted even without hundreds of pages of evidence. But the crucial question clearly is: Would the generalization apply to savages as we know them, from ancient and modern descriptions? No proof is offered that it would. The evidence as to tribes now living is very scanty indeed. Perhaps the Australian facts may be accepted, with some reservations, for in Central Australia, at least, as Andrew Lang and others have argued, the beliefs in spiritual conception are clearly a late development superseding an earlier condition when, for all we know, there were no such beliefs. As to the other evidence, that of the Seri and the Ewhe, for instance (II, p. 279), its more

than doubtful character is too obvious for specific criticism. What is true of modern savages, seems also to apply to those peoples in whose midst sprang up the myths of supernatural birth, and who, like so many of their successors up to the present time, believed in and practiced many devices for asexual impregnation.

It is not at all obvious that such customs and myths are based on an ignorance of the natural connection between the sexual act and conception. These myths and customs are rooted in the belief in magical power, which, in its turn, is correlated with the absence of a view of nature as a nexus of uniform causal relations (as the author also points out). A child may be produced in the normal way, but there are also many other means to the end. The savage builds his hut or canoe and is perfectly familiar with the processes involved, but this does not prevent him from believing that the hut or canoe may arise out of nothing, by the power of magic. In many cases cited by the author there seems to be no need of postulating a belief in asexual impregnation; for instance, in the customs connected with fruit having two kernels, double ears of maize, etc. (I, p. 37). But, however that may be, the facts adduced in the first two and the last chapters of the book do not prove that the peoples who practiced the customs and invented the myths were any more ignorant of the physiology of conception than they were of other natural processes. Such ignorance must have been a fact in the times of remotest antiquity, in the childhood of man; but of those times we know nothing. If that is so, we are no longer justified in connecting the ideas underlying the myths and customs with mother-right, or any other known form of social organization.

I have briefly outlined what the author has to say about mother-right itself. To quote him again: "The result of anthropological investigations during the past half-century has been to show that mother-right everywhere preceded father-right and the reckoning of descent in the modern civilized fashion through both parents" (I, pp. 256-7). The existence of tribes with paternal descent but without any traces of former maternal reckoning does not shake the author's confidence; he asserts, in fact, that such cases can not even shift the burden of proof. What about Starcke, Grosse, Westermarck, Graebner, Cunow (see *Le Devenir Social*, vol. IV), Swanton? Or does he mean historical evidence? Where is it? The question is certainly an open one but up to the present neither facts nor logic justify the assumption of either the former universality of mother-right or its priority to father-right. The problem is of such vast importance that I feel justified in dwelling on it for a

moment. If maternal descent has always arisen under more primitive conditions than paternal descent, we should expect to find some correlation between higher culture and paternal tribes, lower culture and maternal tribes. In North America, to take a conspicuous example, we find no such correlation. The reverse, in fact, is true. The two groups of tribes whose culture ranks among the highest of the continent, the Indians of the North West Coast and the Iroquois, count descent through the mother. The Eskimo, on the other hand, the Northern Athapaskan (excepting those affected by the culture of the coast), the Interior and part of the Coast Salish, the tribes of Washington and Oregon, the Shoshone—all tribes of a relatively low culture—are either paternal or reckon "descent in the modern civilized fashion through both parents." Some African data are highly suggestive in this connection. Among the Herero, the Bawili, the Tshi, and probably some other tribes, the two modes of counting descent coexist; there are two sets of clans, one of which is inherited through the father, the other through the mother. Each individual belongs to one maternal and one paternal clan. Frazer and Hartland diagnose these conditions as transitional from maternal to paternal descent; but of this there is no evidence. On the contrary, the amicable coexistence of the two systems raises a strong presumption against the theory that they belong to two fundamentally different stages in the development of social organization.

When dealing with problems of descent we must always remember that in the undifferentiated social conditions of earliest society no definite ideas of descent could develop. Only as the outlines of social units—be they families, clans, or villages—become more clearly defined, may we expect to find a corresponding definiteness of customs as to descent; and, perhaps, not until the ties of clanship and the rules of exogamy lead to a sharp division between members of one household, do matters of descent loom as prominently in the consciousness of the people as is the case in many primitive communities. As to the most primitive condition referred to above, whether man then lived in families or in hordes, there can be little doubt that social, economic, and sexual pre-eminence rested with the stronger sex.

Inheritance of property, a phenomenon in many respects related to that of descent, seems to have ways of its own. The problem thus becomes very complex.

When dealing with the "Rise of Father-right" the author dwells on numerous examples of survivals from mother-right. If the assumption of the chronological formula mother-right-father-right, is rejected, these "survivals" acquire a totally different aspect.

The author admits that while there seems to be a correlation between maternal descent and the husband's residence with his parents-in-law and between paternal descent and the wife's residence with her husband (as Tylor has shown), many exceptions are found to this rule (the author refers to the Australian evidence). Nevertheless, he repeatedly represents the husband's residence with his wife as a survival from mother-right. When the husband, for a certain period after marriage, is not permitted to take the wife away and may only visit her, openly or secretly, we have another "survival." May not the customs be due, for instance, to the reluctance of the wife's relatives or clanmates, to lose a member of the local group? This would be equally plausible in father-right and in mother-right. The period of probation to which the future son-in-law is subjected (another "survival") may be explained by economic or moral considerations, or what not. Some instances cited by the author are quite puzzling. I leave it to the reader to determine, for instance, what particular customs of the Maidu (II, p. 82) may be interpreted as survivals from the stage of maternal descent. Even sexual laxity, to which so much space is devoted in the second volume, is treated as a prerogative of mother-right, although the author is forced to admit that "matrilineal freedom has often survived into father-right in more or less abundant measure" (II, pp. 136-7). If we forget for a moment that father-right is necessarily preceded by mother-right, the "survivals" become weighty arguments against the author's position. For what they show is that many traits deemed peculiar to mother-right are also found in father-right; a realization which can not but deeply affect our ideas of the social conditions accompanying the two modes of counting descent.

Having treated of mother-right with considerable care, the author has but little to say of the conditions and peculiarities of father-right. The subject can not be discussed here. We may note, however, that the institution of fictitious parenthood clearly presupposes the realization of the significance of paternity, and thus may not be used as evidence of the absence of such realization (II, p. 248).

But let us return to the subject of sexual laxity. Much could be said as to the character of the evidence used by the author, but I shall merely refer to one account, that of Monteiro (II, pp. 116-117) which may serve as a warning to the reader. But the author sins in a much more important matter. He treats of sexual looseness but he forgets to mention the stringent and multiform regulations which in primitive society restrict sexual intercourse and direct the selection of marriage mates. This is indeed a strange omission. He might as well describe modern

society and omit to mention legalized monogamous marriage. It is true enough in primitive society that absolute physiological chastity is but seldom sought or valued. But this is a matter of point of view, in which even modern civilization can boast but of one-sided progress. If, on the other hand, we juxtapose the sum total of legitimate to that of illegitimate sexual intercourse among ourselves and in primitive communities, the comparison may prove favorable to the latter. Just *what* is sanctioned by public opinion is, of course, an important question, but it is not the whole question.

Very much the same criticism may be passed on the author's method of dealing with sexual jealousy. Any one acquainted with ethnographic literature (Mr Hartland not excepted) knows that there is plenty of direct evidence of the existence of that passion among primitive men. On the other hand, we might vastly extend the author's list of cases where the savage exhibits no jealousy in situations where to us such exhibition seems natural and imperative. The explanation clearly lies in habits of inhibition which, beginning in childhood, become fixed early in life. This proposition does not require any proof; however, the subject has been nicely elaborated by Jochelson and Sternberg in their treatises on the peoples of eastern Siberia.

The book is laid aside with a sense of keen disappointment. It does not bring the solution of the problems discussed nor does it indicate the direction for further research. In fact, we can not endorse any of the author's conclusions, with one exception, namely, that mother-right is not based on the uncertainty of paternity (I, 325). Ignorance of the physiology of conception no doubt once pervaded mankind; but no proof is forthcoming that such was the case in a state of society at all comparable to that found among primitive peoples we know. Hence the association of that remote state with mother-right is quite artificial. The author's characterization of the social conditions of mother-right, especially in connection with sexual relations, is vitiated by his assumption that mother-right always preceded father-right; hence, conditions which are common to society under both modes of counting descent are by him ascribed to mother-right only, and, if found in father-right, are treated as survivals. The assumption itself of the universality and priority of mother-right, does not by any means represent, as the author would have us believe, the last word of anthropological science. Father-right is disposed of with strange superficiality, while the artificial and conventional character claimed for that system remains unproven.

The cause of the author's failure lies in the fact that he kept aloof

from the historical point of view which is beginning to revolutionize the methods of ethnological inquiries. We want a systematic account of the actual distribution of father-right and mother-right. We should like to know the social characteristics of the two systems as found in concrete cultural areas. We may still be able to ascertain some of the historical processes which accompany or determine variations or radical changes in the mode of reckoning descent. Our knowledge of the regulations of marriage and sexual intercourse, in all their manifoldness, is limited indeed; while scarcely any analysis of the psychological basis of these regulations has as yet been attempted. The subject of systems of relationship, in its conceptual as well as in its terminological aspects, is coming to the fore again, and awaits systematic treatment (the author, by the way, merely hints at it). In vain would we look in Hartland's work for research in any of these directions. Instead, he tries to solve complex problems of social organization and development with nought but loose psychological generalizations to start from—absence of jealousy, indifference of paternity, ignorance of physiological conception—generalizations supported by an incoherent mass of ethnographic material.

A. A. GOLDENWEISER.

The Prehistoric Ethnology of a Kentucky Site. By HARLAN I. SMITH. Anthropological Papers of the American Museum of Natural History. Vol. 4 part 2. New York: Published by the Museum, 1910.

It is well understood among archeologists of the present time that the important unsolved problems of aboriginal man in America are those of race origins, of culture origins, and of chronology, and the author by this contribution has paved the way to the study of these problems by working out the culture history of this particular prehistoric Kentucky site and comparing the results with known and similar culture sites in Ohio, thus furnishing a vast amount of interesting and valuable data concerning the past of this barbarian culture.

The trained archeologist snatches every thread of evidence that leaves its trace in material form, and the author has shown his training along this line by discussing at length the "Resources in Animal and Plant Material" taken from the Kentucky village and making a comparison of the finds with the villages in Ohio. The comparison shows the gray fox absent, but in its stead the red fox. The red fox was not found at either the Baum or Gartner village sites, but the gray fox was very abundant. The only domestic animal known to prehistoric man in Ohio, namely the Indian dog, was also absent from the Kentucky site.

The varieties of corn, the great agricultural product of Kentucky and Ohio sites, were similar, but the subterranean storehouses so abundant in the Ohio sites were absent in the Kentucky sites. The agricultural implements in the Ohio sites were invariably made of large, heavy mussel shells, but, as one approaches the Ohio River region, the shell hoe is replaced somewhat by a hoe made from a thin slab of ferruginous sandstone and, according to the author, by the time the Kentucky site is reached the shell hoe has entirely disappeared.

The author's further discussion and comparison of the various branches of human activity is most worthy. Prominent among these are hunting and the manufacture of the various implements for that purpose; fishing and the preparation of fish hooks; ceramic art and the manufacture of vessels for cooking, etc. No strainers of pottery were found at the Baum or Gartner sites, yet they were apparently found in abundance at the Fox farm site as the writer has lately received a number of specimens from Mr Philip Hinkle, the curator of archeology, Cincinnati Museum, Cincinnati, Ohio.

Graphic and decorative arts are shown upon many artifacts, such as engraving, notching, impressing, and painting. In fact the author has discussed and compared every phenomenon brought forth by the explorations at the Fox site as exemplified by 60 pages of text and 47 full-page plates, and it is to be regretted that Mr Smith was not permitted to finish the explorations, which would no doubt furnish still further data needed to successfully work out the obscure problems of prehistoric man.

WILLIAM C. MILLS.

Le Préhistorique dans l'Europe Centrale. Par A. RUTOT. Extrait des Actes et Mémoires du XII^e Congrès d'Archéologie et d'Histoire, Malines, 1911. Pp. 114, text figures 22.

This is an abridged second edition of the memoir by the same title that appeared in 1903, with the addition of a chapter on the neolithic. While belief in the existence of a rude stone industry antedating the paleolithic, the so-called eolithic period, did not originate with Rutot, he has been its most active champion for more than a dozen years. To him we owe much of the literature on the subject and practically all the terminology of the eolithic subdivisions. To his Mesvinian, Mafflean, Reutelien, Saint-Prestian, Kentian, and Cantalian horizons of 1903 he has added a still older one, the Fagnian of the Oligocene. This is a step farther than conservative archeologists are able to follow. The latter

can account for all the phenomena at Boncelles and on the Hautes-Fagnes through natural agencies, such as pressure exerted by overlying deposits; and their position is certainly strengthened by the recent discoveries of Commont and Breuil in the lower Eocene station of Belle-Assise at Clermont (Oise). Thus the range of the colithic in the chronologic scale is still a debatable question and will probably continue so to be for an indefinite time owing to the difficulties in the way of drawing a hard and fast line between that which is natural and that which is artificial or intentional.

In the domain of the paleolithic Rutot has added an initial horizon called the Strépyan; for the other horizons he accepts the terminology of the French archeologists.

According to Rutot the change from the paleolithic to the neolithic took place at the beginning of what geologists call the recent epoch, when the reindeer disappeared from Central Europe and the present fauna established itself. At this time an elevation of the land mass practically closed the straits of Denmark converting the Baltic into a great lake. The oldest neolithic industry of Denmark is found in the peat bogs dating from this epoch. It includes objects of stone and bone but no pottery. The second neolithic facies is from the kitchen middens that skirt the shores, and which were formed after a lowering of the land mass had reestablished the straits of Denmark. Then followed a slight elevation, bringing the sea and land to about their present adjustment, and marking the appearance of the first polished stone implements, those of a type that is biconvex in section. This type was succeeded in the fourth epoch by one that is rectangular in section. The author divides the neolithic of Central Europe into five epochs: Tardenoisian, Flenusian, Campignyan, Spiennian, and Omalian. With the beginning of the Campignyan the industrial evolution seems to have been about the same in both Scandinavia and Central Europe. In Southern Europe the neolithic series begins with two phases that differ notably from the Tardenoisian, viz., the Asylian and Arisian of Piette.

The author gives due space to a consideration of the various human remains that might have a bearing on the greater antiquity of man. He classes the lower jaw recently found at Mauer (*Homo Heidelbergensis*) as eolithic, since it belongs to his Mafflean horizon. The much discussed skeleton from Galley Hill, in the Thames valley below London, he places at the base of the middle Quaternary, corresponding thus to the Strépyan horizon. If this be the case, then we have the interesting phenomenon of two somatologically distinct races existing side by side in Europe for

a long period of time. The marked differences between the Neandertal type and the Galley Hill specimen lead the author to believe that the men of Neandertal, Spy, Krapina, Le Moustier, and La Chapelle-aux-Saints are descendants of the primitive eolithic race with stagnant mentality represented at present by *Homo Heidelbergensis* and *Pithecanthropus erectus*; while at the beginning of the middle Quaternary there appeared a new race with progressive mentality represented by the Galley Hill man.

GEORGE GRANT MACCURDY.

The North American Indian. By EDWARD S. CURTIS. New York: Published by the author, 1911. A series of volumes illustrating and describing the life of the Indians of the United States and Alaska. Field research conducted under the patronage of J. Pierpont Morgan: edited by Frederick Webb Hodge. 20 vols. Volumes VI, VII, and VIII.

The earlier volumes of this work have made their appearance from time to time since 1907 and have received well merited commendation from scientific men and artists in America and in Europe. Each volume is complete in itself. Volume I describes the Navaho and Apache; Volume II the Pima, Papago, Mohave, Maricopa, and other tribes of the Yuman stock; Volume III various tribes of the Sioux; Volume IV the Apsaroke and Hidatsa; Volume V the Mandan, Arikara, and Gros Ventres.

It would seem impossible today to improve upon the book-making and technique of the earlier volumes, but these later ones show progressive improvement in spirit and scope. The same methods of field work have been pursued and the same care exercised in the selection of suitable illustrations and material for the text.

Mr Curtis has been well known for a number of years as a photographer of Indian life. His exhibitions held in many of our large cities have been a surprise and a delight to photographers and artists alike. His pictures appeal to the artist and to the layman because they represent the side of the Indian which is close to nature. Mr Curtis is primarily an artist, but this fidelity to nature, which led him to a closer study of the habits of life of the Indian, gave him also the scientific point of view.

In order to obtain photographs of the Indian in his ceremonial attire, or of the ceremonies themselves, it was necessary to gain his complete confidence, and, when this was once secured, it was less difficult to learn the secrets of his life. Mr Curtis has been very successful in reaching the mind of the Indian and in presenting it to his readers. No doubt much of the charm of his stories comes from the fact that they have been

written in tent, cabin, and camp, in the very atmosphere of the simple primitive life they describe. Many times the Indian is allowed to tell his own story in his own way, which gives us a new view of the situation.

The greatest value of the work lies in its wealth of illustration. Each volume of text contains seventy-five full-page photogravures of $9\frac{1}{2} \times 12\frac{1}{2}$ inches, and is accompanied by a portfolio of thirty-six copper engravings, 20×24 inches. No praise could well be an exaggeration of these photographs; they are admirable in every particular and must be seen to be appreciated. The portraits are particularly notable. Yet it is not a haphazard collection of excellent portraits. Every photograph is an illustration of an Indian character or of some phase of his existence. An attempt is made to illustrate all of the customs and arts of the people. The importance of the work can not be overestimated, because the Indian is fast losing his typical characters. The white man's civilization, disease, alcohol, and inhumanity are producing dire results. A degenerate, impoverished race is taking the place of the former proud possessors of the land. Every year some old person passes away and with him some tradition, myth, or knowledge of a sacred rite possessed by no other.

The work is not intended primarily for the specialist. It makes its strongest appeal to the general public and in terms which make it not only intelligible but extremely interesting to those unacquainted with the language and methods of the trained ethnologist. The simple, every-day life of the Indian is made to appeal to the imagination of the reader through vivid presentations of the camera by means of artistic treatment; and this is accomplished without sacrificing scientific accuracy in the least degree.

The systematic scope of the work should be noted. It is not a collection of fragments, but on the contrary each volume is a definite part of the whole scheme which will include representative tribes from all the linguistic stocks in America. The author is succeeding admirably in his endeavor to "make the work one which in fact cannot be questioned by the specialist, but at the same time will be of the greatest interest to the historian, the sculptor, the painter, the dramatist and the fiction writer, as well as to the ethnologist."

Those of us who have had experience in the field can appreciate the tremendous energy, persistence, and courage necessary to carry on a work of this character, requiring more than twenty years of camp life. Ease, comfort, home life, and family must be exchanged for the hardest kind of work and the thousand and one vexations of wearing travel through difficult regions. Nothing less than a consuming passion could impel one to the task.

The sixth volume deals with the Piegan, Cheyenne, and Arapaho, who belong to the western division of the Algonquian stock. The Piegan, widely separated from the other two, became allied to the Bloods and Blackfeet and were usually known as Blackfeet. They roamed over a vast territory in the United States and Canada and soon became known to the traders as skilful hunters. The handicraft of the Piegan was concerned with the production of implements, clothing, and shelters. Basketry and pottery were unknown to them. Water was boiled in rawhide vessels by means of heated stones. The tribe was divided into *gentes*, each with its own chief. A council of subchiefs and leaders of the warrior society chose a head-chief who was nominally in charge of the tribe. For success he depended upon the support of the societies who controlled the warriors and thus "public opinion." The function of the societies was to preserve order, punish offenders, and protect the camp. The societies were organized on the basis of age and each one had its own songs and paraphernalia, all of which passed by purchase to the next group. Marriage was arranged by an emissary who carried presents to the girl's father. Polygyny was customary and a man had a prior right to the younger sisters of his first wife. For each he sent presents to her father when she was of marriageable age. Dead bodies were washed, painted, bound in skins, and placed in trees or on scaffolds. The spirit went to "Big Sand" where it existed, with plenty of game and without any more suffering. The Sun received the supplications of all who desired supernatural aid. A youth secured his guardian spirit by solitary fasting. The chief ceremony was the Sun dance which is well described, and the traditional origin is given. Torture in the sun ceremony was unusual and practiced as the fulfilment of a pledge to the Sun in a dangerous crisis. The moon, the morning star, the milky way, and the dipper were also deified. Supernatural power was attributed to an unusually large number of medicine-bundles. The methods used and the songs sung to obtain medicine are well described. In dealing with mythology the author presents typical myths heard by himself from each tribe.

The Cheyenne and Arapaho, although speaking distinct dialects, are culturally much alike. Cheyenne history is traced from La Salle's letter of 1680, through their long struggle for an independent life, to their present condition. They resented the unjust acts of the United States government and, on account of their high spirit and dauntless courage, they were in continual conflict with the authorities. They knew their just cause was hopeless, yet they fought with such fury that it

"cost the lives of twenty-five soldiers and a million dollars for every Indian killed."

The government of the tribe is in the hands of a council of forty chiefs elected in a body by the retiring members. The warrior society, as the only body that could enforce regulations, had a prominent place in the government. These societies differ from other like Algonquian organizations in that they are not age societies. Religious belief centers about the sacred arrows brought to them by the culture hero. Each year every man goes to look upon the arrows and to offer prayers and gifts. The Sun dance described was witnessed by the author in 1909.

The music of the three volumes was transcribed from phonographic records by Henry F. Gilbert, who has accomplished a most difficult task in a very satisfactory manner. He finds it impossible to render primitive music accurately by means of our notation because the Indian habitually sings degrees of pitch between those represented by our symbols. It is unusual to find a song in which a sense of the key is maintained throughout the song. The rhythm is very simple and the often noticed complications between the drum-beat and the melody are accidental.

In volume seven, tribes representing three linguistic stocks are treated; the one tribe of the Kitunahan stock; the Yakima and the Klikitat of the Shahaptian; and fifteen tribes of the Salishan. A comprehensive survey is given of all branches of the families treated and sufficient specific mention of the smaller groups to give a general notion of their relationships. The territory occupied by these families is within the Columbia River basin, a forested, mountainous region which furnished an abundant food supply consisting of roots, game, and fish. The term Yakima includes all the bands of Yakima valley. There were no gentes or clans, but each band had its chief who in most cases was the eldest son of the former chief. If the son displayed a lack of ability, then some more able man was selected to be the chief. Religious practices were not highly developed. These people were animists and directed their efforts toward acquiring the supernatural power of the spirits of animals. Guardian spirits were secured in solitude and some spirits gave men power to cause or exorcise sickness. They had no idea of immortality. The medicine chant, the only indigenous ceremony, was held in mid-winter upon the invitation of the medicine-man. The Klickitat tribe has lost its identity by being merged with the Yakima bands. Their language, culture, and religious practices do not differ materially.

Numerous tribes of the Salishan stock occupy territory in Montana,

Idaho, and Washington. The author gives the separate history of each tribe, but the culture and customs are treated together to avoid repetition. When first observed all these tribes wore clothing of the plains type and lived in lodges covered with rush matting. Cedar-root baskets were used for mortars and for cooking food by means of heated stones. The chief was selected by the council of old men and warriors, but by custom the choice was limited to the men of the former chief's family. The local band was the unit, there being no clan organization. Blood relationship was the only bar to marriage. The younger sisters of a man's first wife usually became his wives also. A widow must marry her husband's brother, or obtain his consent to marry another person. Their religious practices were very simple; there was no worshipped deity. They believed they could obtain the power of supernatural creatures. All the tribes, except the Flatheads, had a winter ceremony in which sacred, revealed songs were sung by persons possessing guardian spirits. Those possessed of a certain spirit wished to dance all the time and to give away all of their property—a peculiar form of emotional insanity due to religious excitement.

The Kutenai form a separate stock. They live in British Columbia and northern Montana and Idaho. Their traditions give no account of a migration into this region. The tribe lost its unity in comparatively early times and the bands spread southward and eastward, being attracted by the buffalo. They have failed to profit by contact with civilization and have become a filthy, idle community. Their principal food was the flesh of animals, some of which, as the elk and mountain goat, also furnished skins for robes. They were skilful in the manufacture of two varieties of canoe—a pine-bark craft, and a skin-covered boat. The separate bands were distinct, each led by an hereditary chief, who directed the movements of his band.

Volume eight treats of the Nez Percés, Wallawalla, Umatilla, Cayuse, and Chinookan tribes. The first three belong to the Shahaptian family. More attention is given to historical matters relating to the Nez Percés than is usual in these volumes because it seemed desirable to correct various mistakes of historians by giving the Indians' story of the war of 1877. By reason of their Earth-mother religion they were attached to the land in such a way that they could neither sell their land nor cultivate the soil and be consistent with their traditions and religious teachings. The "non-treaty" factions were contending, not alone for their homeland, but for the religion of their fathers. When the final word came that they were to be removed to the reservation, all the chiefs accepted the

situation as inevitable and made ready to move; but just at this time a drunken Indian murdered a white man who had killed his father, and thus the war was precipitated. In all engagements the Indians showed good courage and fighting ability, but neglected to take advantage of Gen. Howard's delays and escape into Canada. Curtis is convinced that Chief Joseph, whom historians have made a national hero, was no more responsible for the successes or failures of the war than were several other chiefs. Joseph was the last of the chiefs. When only thirty of his warriors remained, he surrendered to Gen. Miles, saying "He who led the young men is dead"—referring to Looking Glass and giving him the credit for leadership. When the Nez Percés were first visited they were prosperous and took great pride in dress and decoration. Their handicraft shows greater skill than that of the Plains tribes. They lived in communal lodges with a row of fires in the center. An underground house with ladder and trap-door was used by the women. Their religion, mythology, and ceremonies seem to have been disseminated from the coast by way of the Columbia. The principal religious observance is the mid-winter medicine ceremony, at which time the boys who have seen visions may sing the songs the spirits have taught them, and medicine-men may test their powers in various ways. The music appropriately matches this emotional religion, which shows a tinge of hypnotism running through it. The Cayuse belong to a distinct stock, but they have lived so long in contact with the Nez Percés and have so intermarried with them, that they have lost their old language, culture, and physical characteristics.

The Chinookan tribes occupied the banks of the lower Columbia. Food was so abundant that they became an indolent, licentious people who easily succumbed to the diseases and alcohol introduced with civilization until now fewer than two hundred remain. They hired Klikitat warriors to fight for them and used their slaves, whom they obtained by barter, as assassins to avenge their personal wrongs. Both sexes tattooed upon the face, arms, and breasts the images of animals or birds seen in dreams. The dead were taken in a canoe to an island in the river and deposited in the house of the dead. The widow made gifts to relatives and friends. A year later the bones were gathered, wrapped in skins, and left in the burial house; when again presents were distributed. They distinguished between the diseases due to natural causes and those due to spiritual causes. The former were treated with herb medicines while the latter were treated by supernatural methods. Their myths show great wealth of imagination,

but are incomplete in cosmology. They start with the world already created and inhabited with beings in human form, both good and evil. Coyote transformed the evil creatures into animals and the good ones into perfect human beings.

At the end of each volume of this series there is an appendix giving a very concise tribal summary; music used in dances and songs sung on various occasions; selected vocabularies from each tribe. We have in this series of volumes not only complete information concerning the traditions, beliefs, customs, arts, and home life of these picturesque people, but also a vast amount of new material in the nature of ceremonies, folk-tales, myths, and music which will be valuable for comparative study.

The editorial management of the publication is entrusted to Frederick Webb Hodge, Ethnologist-in-charge of the Bureau of American Ethnology, whose wide experience as chief editor of various scientific publications makes him eminently fitted for the work and guarantees its scientific accuracy.

WM. CURTIS FARABEE.

Osiris and the Egyptian Resurrection. By E. A. WALLIS BUDGE, M.A., Litt.D., D.D., Lit.F.S.A., Keeper of the Egyptian and Assyrian Antiquities in the British Museum. Illustrated after drawings from Egyptian Papyri and Monuments. London: Philip Lee Warner; New York: G. P. Putnam's Sons, 1911. 2 volumes. Large 8°, pp. xxxv, 404; and viii, 440.

The works on the religion of ancient Egypt from the prolific pen of the indefatigable keeper of the Egyptian and Assyrian antiquities in the British Museum would fill more than one "five-foot shelf"; in fact they make up a respectable Egyptological library by themselves. In the present sumptuously gotten up volumes Dr Budge attempts "to discover the source of the fundamental beliefs of the indigenous religion of ancient Egypt, to trace their development through a period of some two scores of centuries, and to ascertain what the foreign influences were which first modified Egyptian beliefs, then checked their growth, and finally overthrew them" (I, vii). The two principal propositions which the author seems to endeavor to elaborate and to establish in the work before us are, first, that the foundation of the religious principles and of the whole of the social fabric of Egypt resting upon them was the cult of the ancestral spirit, or ancestral god; secondly, that the Egyptians were Africans, and their religion was of indigenous African origin, and that therefore a general resemblance existed between ancient

Egyptian beliefs and practices and those of modern African peoples, particularly those of the Sudan. The hypothesis of an early Semitic invasion into Egypt, adopted by Egyptologists generally, is not even mentioned. For the confirmation and elucidation of his second thesis the author quotes African parallels almost to each and every Egyptian belief, custom, and rite. These parallels are not always convincing or elucidating, and some of them are irrelevant. Thus, for instance, tree- and moon-worship (II, 259, 251) was also common among the Semites; the love for beads, shells, teeth of animals, pendants, etc. (I, 323), is shared with the ancient Egyptians, not only by modern Africans, but also by the aborigines of America and the Pacific Islands. Still, in their aggregate, these parallels are impressive.

Osiris being the central figure of the Egyptian religion, and the hope of resurrection and immortality the principal concern of the Osirian worshiper, they are made the centers of inquiry. But incidentally we are introduced to the whole host of the Egyptian pantheon.

"Osiris was a compound of many gods, and his cult represented the blending of numerous nature cults" (I, 18). But what gave him the dominating position in the Egyptian pantheon was the fact that the Egyptian believer saw in him the human-divine ancestor, the man-god, who not only brought civilization to Egypt but by his suffering and death at the hands of Set, and subsequent resurrection, was raised to the position of sovereign ruler of the nether world and became the hope and symbol of life after death for every believer. His fate of dying and rising to a new better life was to be, through his power and mercy, that of every dying believer. Hence, as Osiris was represented as a dead man (mummy), every dead worshiper of Osiris was believed to become in his turn an Osiris and share the bliss of the god.

In addition to Osiris, it is well known that the Egyptians paid divine honors to many nature gods—sun, moon, water, sky, earth, the Nile, and a host of spirits and numerous animals which were considered as symbols of the gods or their abodes. But "little by little the Egyptians seem to have dropped the active cult of other gods, Osiris, Isis, or Hathor being in the eyes of the indigenous people of more importance than all of them, for they gave resurrection and immortality to the dead and prosperity to the living" (II, 20).

The cult of Osiris and his circle (his sister-wife Isis and their son Horus) spread all over southern Europe and into many parts of North Africa, where it continued to be a religious power until the close of the fourth century A. D.). It lingered on the Island of Philæ down to the

middle of the sixth century A. D., and many of its underlying ideas and beliefs survived in Christianity.

Dr Budge insists that the Egyptian cult was not polytheistic, but that the Egyptians throughout their long history and the various changes and transformations of their religious conceptions held fast to a belief in the existence of one great God, almighty and eternal, creator and maintainer of the universe, of whom the other gods were mere emanations and, as it were, deputies for the management of the affairs of the world (I, xxiii, 348 *seqq.*). But considering the texts quoted in corroboration of this thesis it would seem safer to say that they contain a strain of monotheistic sentiment, a pantheistic conception which in a vague way affirms the unity of the divine—a conception which arises in every nation at a certain stage of civilization and political organization. It is well known that the one bold attempt to introduce a pure, though somewhat crudely materialistic, monotheism, namely the worship of the Sun-god as manifested in the solar disk, which was made in the thirteenth century by Amenophis IV, ended disastrously.

Space will not permit even the naming of the topics which are discussed in these volumes. A few may be mentioned at random to give an idea of the wealth of material which they contain, not only for the student of the Egyptian religion and of comparative religion, but also for the anthropologist and folk-lorist: Osiris and cannibalism; Osiris and human sacrifice and funeral murders; Osiris and dancing; magic; fetishism; spitting as a religious act; the African doctrine of last things; pottery made by hand; marriage; purification after birth; circumcision; twins; finger nails; the tortoise.

Many of the Egyptian texts quoted are here translated for the first time. For the parallels from African lore the author has drawn upon his own observations while traveling in Africa and the accounts of numerous explorers, travelers, and missionaries. The large number of finely executed illustrations, some in colors, present, as it were, a kaleidoscopic view of the Egyptian pantheon, of the development of the Egyptian temple and tomb, of the weird funerary rites and ceremonies and the experience of the deceased in the Amente or nether world. An excellent, full index renders the use of the volumes for reference a pleasure.

I. M. CASANOWICZ.

The Encyclopedia Britannica. Cambridge University Press. Eleventh Edition, 1911. Vols. I-XXVIII.

In nearly every branch of human learning the new edition of the *Encyclopedia Britannica* has received a hearty welcome; and anthro-

pology should also acknowledge its indebtedness. Indeed, it is doubtful if the superiority of the new edition over the older ones can be so much appreciated by the student of any other department of science. Even the articles on topics not usually thought of as part of this science are so treated in regard to early forms, development, survivals, and comparative cultural value, as to well reward reading by the student of anthropology in its broader aspects. Even such unpromising subjects as "Asceticism" and "Beards" have this virtue. The work in its entirety is doubtless the best testimony to the development, and the present scientific and cultural value of a subject about which the cautious outside world has been and to some extent still remains—and not without reason—sceptical.

The article on "Anthropology" is by Dr Tylor. If anyone rivals this master in the treatment of his subject it is Mr Reade in the article on "Archeology," devoted wholly to prehistoric archeology. Only those who are acquainted with the *Guides to the British Museum* would believe it possible to write so excellently and discriminatingly as Mr Reade does.

The weakest part of the work—we write, of course, from the standpoint of the anthropologist—is its ethnology. There is no lengthy article dealing with the classification or the racial distribution of man. Of the individual tribes only the more important are given under the tribal name. For example, a few lines are found under the title "Micmac" (southeastern Canada) but their neighbors, the Maliseet, are not mentioned. Perhaps most disappointing of all is the article on "America (North)" which, however excellent it may be, does not do justice either to the theme or to the space. Less satisfactory—because of its brevity—is the article on the distribution of races in Asia (see "Asia"). As to "Africa," our sole regret is that Mr Joyce did not have more space allotted him. We hope to hear further from him on a field which he seems to have made peculiarly his own. The list of tribes which he gives is most valuable, and as much may be said for his article on "Bantu Languages." (In general, however, languages and linguistic stocks have not received their due.)

Each geographical or political division has a section devoted to the ethnography of that area. Most of the more important ones are written by ethnologists of repute. This is not always the case, however, and occasionally the writer shows his poor grasp of that portion of his subject. The writer of the article on "Australia," who tells us that "the tribal organization of the Australians was based on that of the family," is surely not quoting from standard works on that continent, although he

has undoubtedly consulted them. Perhaps the most common fault is to attribute to an entire continent or large ethnographical area, types or characteristics which are found only in limited areas. This is likely to leave a very wrong impression upon the reader not familiar with the given territory and not trained in ethnological discrimination. To cite but one of the many cases in point: "Among the North American Indians ecstatic fasting is regularly practised. A faster writes down his visions and revelations for a whole season. They are then examined by the elders of the tribe, and if events have verified them, he is recognized as a supernaturally gifted being, and rewarded with the chieftancy." ("Asceticism," by Conybeare.) Now, as a matter of fact, you might exhaust the literature on a great many North American tribes before you would find confirmation of this writer's assertion; and it is not unfair to say that the statement is as true and a bit more definite, if in place of "North American Indians," were inserted "the Americans north of the equator." One can not too much deplore the use of these general and false rather than specific and true assertions.

In physical anthropology we have an article on "Primates" excellently illustrated and condensed, but little on the much needed topic of comparative anatomy. An admirable account of "Albinism" is given and in the articles on "Dog" and "Wolf," as well as in numerous others, there is much of interest and profit if not for the physical at least for the cultural anthropologist. Technology receives but scant and imperfect treatment in regard to the simpler forms, and seldom have these topics been assigned to anthropologists.

The articles that fall within the scope of social anthropology have been dealt with in various, and sometimes almost contrasting, ways. In the articles on "Animism" and "Taboo" (both by N. W. Thomas) for example, there is, in the main, merely a convenient arrangement and subdivision of the facts with a selection of those that seem most important. Other topics, such as "Ritual" and "Religion—Primitive" (both by R. R. Marett), are treated in quite a different manner. In the latter the attempt is rather to interpret, criticise, and explicitly or implicitly to put the emphasis upon *method*. Some of these show a keen, penetrating insight and express in a sentence some idea that most writers could elucidate only in a paragraph. Perhaps the essential characteristic of primitive peoples has never been so well expressed as in the phrase: "Savagery—the stage of petty groups pursuing a self-centered life of inveterate custom, in an isolation almost as complete as if they were marooned on separate atolls of the ocean." (See "Religion.")

Again we read "primitive religions are like so many similar heads on a string, to wit, the common conditions of soul and society that make, say, totemism, or taboo, very much the same thing all the savage world over, when we seek to penetrate to its essence" (ibid.). Even so; in this day of ready-made generalizations and rapid "Evolutions" we need the caution: "The fact is that comparative religion must be content to regard all its classifications alike as pieces of mere scaffolding serving temporary purposes of construction" (see "Ritual").

On almost every phase of anthropology the student will get much help from the Encyclopedia. At the end of each article is a bibliography of a few books bearing on the topic, and these have, almost without exception, been selected with great care. Perhaps not the least part of its usefulness will be the information it gives on numberless topics germane to that part of anthropology in which the student is immediately interested. For example, if your field reporter fails to give desired details about the fauna, flora, or topography of the country about whose inhabitants he is writing, seek in the *Encyclopædia Britannica* and ye shall find.

W. D. WALLIS.

The Idea of God in Early Religions. By F. B. JEVONS. (The Cambridge Manuals of Science and Literature.) Cambridge University Press, 1910. Pages x, 170. (Price 1 shilling.)

This is a comprehensive survey of almost every phase of "early religions," from the influences of social environment, the theories of animism, fetishism, magic and the magico-religious, through mythology, ritual, sacrifice, prayer, communion, to such conceptions as the idea and being of God. No one should hope to treat religion at once so broadly and so tersely. The work gives one the feeling that the author has not done justice to any of his topics rather than that such a hasty review enables one to see these various aspects in their organic relations.

Aside from this, the vagueness of the treatment will always be an objection to the immediate or permanent value of the book. The author does not hint at what he means by "God"—whether personified or not—by "idea of God"—whether conscious reflection—or by "early religions." The latter seems to include anything from the Australian and "the jungle-dweller of Chata Nagpur"—a favorite of the author—to Socrates and David. Hence we are always left in doubt as to what tribe or people is meant when a generalization as to religious condition or advance is made. As, for example, on page 30, where he says: "As

polytheisms have developed out of polydæmonism, that is to say, as the personal beings or powers of polydæmonism have, in course of time, come to possess proper names and a personal history, some idea of divine personality must be admitted to be present in polydæmonism as well as in polytheism; and in the same way, some idea of a personality greater than human may be taken to lie at the back of both polydæmonism and fetishism." Either the author has some one or more particular tribes in mind when he makes such generalizations or he believes them applicable to all tribes and peoples alike—unless we suppose that he merely evolves these conceptions out of his inner consciousness from a sense of the general fitness of things. Whatever his authority for these statements may be, the treatment is always unsatisfactory when we are given no clue at all as to what tribal group is meant.

The author's doctrines become intelligible only by admission of two suppressed principles, which he nowhere states but throughout inferentially takes as granted: First, evolution of religious thought has always taken one fixed and given direction; second, this form of evolution in a more or less advanced state is to be found with every tribe and people. Admit these and the book is of real value; deny them, and it is difficult to say in what its value consists. It is true that Dr Jevons himself speaks of a dispersive evolution which takes many turns and twists and does not move steadily along in a uniform groove. Notwithstanding his recognition of this theory, however, his seems to be a case in which rival and contradictory theories can be held without discarding the one where practice dictates following the other—and this the unjustifiable one.

W. D. WALLIS.

Modern Theories of Religion. By ERIC S. WATERHOUSE. London: Charles H. Kelly, 1910. Pp. xi and 448 (441-8, index). (Price 5 shillings net.)

Only a limited portion of this work (pp. 333-363) deals with anthropological material. Despite the fact that Dr Waterhouse seems unacquainted with the source material, it must be admitted that he has handled the various theories with regard to primitive religions in a critical manner and with considerable understanding of their implications. While this can never compensate for first-hand and thorough knowledge of the literature on which these theories are based, the manner of handling his data and interpreting the phenomena is a good object-lesson for an ethnographer interested in the meaning and significance of the facts of savage tribal life. It is matter of surprise that no reference

is made to the works of Marett nor to any of the *L'Année Sociologique* school; and the absence of an acquaintance with them is the more remarkable since Dr Waterhouse's interests in anthropological theories center around the works of Tylor and Frazer, and the topics of animism and super-naturalism, magic and religion, and the emotional basis of religion.

On the last-mentioned the author holds that:

"between the lowest man and the highest brute, it may be assumed there is no break, that continuity is complete; but that must not prevent the facts being handled as we have them, and they are these: that, whilst the emotions that are religious in man exist in brutes, they do not exist as religion in brutes; but their religious quality is something added to them in their passage to man, a something that belongs to man as man" (353).

The writer is certainly correct in saying that:

"Amongst the special difficulties of dealing with religion must be placed the fact that religion, from its nature, asserts itself amongst all customs, and intermingles with primitive science, philosophy, magic, mythology, superstition, ancestor-worship and the like. Seeing that the anthropologists cannot agree upon a definition of the thing to be sought, it must follow that a good deal of confusion between religion and those things with which it manifests itself must arise, and will arise, until there is closer agreement as to what constitutes the essence of primitive religion.

"Further still must it be remembered that religious beliefs and observances, on account of their sacred associations and the natural reticence of the believer, together with dread of breaking taboo, and dislike of alien curiosity, are generally the least understood and worst reported of all anthropological facts, and evidence concerning them must be earmarked accordingly."

It is sometimes well to see ourselves as others see us. Perhaps the anthropologist himself is somewhat to blame for the mistaken theories of psychologists and of students of religion with regard to the import of the facts collected by the field-worker. For this reason if for no other a knowledge of Dr Waterhouse's use of the anthropological material at his command should repay every anthropologist. For, after all, savages are human beings and—though field-workers seem prone to forget it—ethnography is but one phase of the history of man.

W. D. WALLIS.

The Origin of Civilisation and the Primitive Condition of Man. By the RIGHT HON. LORD AVEBURY, P.C. Sixth Edition (1902). Reissue with a New Preface. London, New York, Bombay, and Calcutta: Longmans, Green, and Co., 1911. $8\frac{3}{4} \times 5\frac{3}{4}$, pp. xxxii + 577. (Price 7s. 6d. net.)

Lubbock's celebrated book hardly requires an introduction at this late day, for even the new preface accompanying this edition is merely a restatement of the author's position in reply to his critics, and has been recently superseded by a fuller rejoinder in a distinct publication. There are some references to Spencer and Gillen's investigations on Australia, but otherwise there is little attempt to bring the work up to date even in the mere matter of selecting authorities. Sproat is still the chief authority cited on the Northwestern tribes of America, and the discussion of fetishism has not been modified by the illuminating researches of Pechuel-Loesche and the publications of the Tervueren Museum. From a certain point of view the lack of novelty is hardly to be regretted. For Lord Avebury's book represents, perhaps more clearly than any other ethnological work, the theoretical standpoint of a certain period in the history of anthropology. In this sense it may well be compared with the popular works of Haeckel, the later editions of which also show a rather limited comprehension of modern methods of research, but which remain invaluable documents for the historian of biological science. And, as the sane zoölogist of today can not deny the great impetus given to biological study by Haeckel's writings, so the ethnologist with a proper historical perspective will never fail to recognize the place of *The Origin of Civilization* as one of the earliest expositions of culture-history from the evolutionary standpoint and as a successful attempt to familiarize the lay world with some of the most interesting data of ethnology.

ROBERT H. LOWIE.

SOME NEW PUBLICATIONS

D'ALVIELLA, *Comte* GOBLET. Croyances, Rites, Institutions. Paris: Paul Geuthner, 1911. 3 vols., $10 \times 6\frac{1}{2}$, pp. 386, 412, 389, ills.

BARRETT, S. A. The Dream Dance of the Chippewa and Menominee Indians of Northern Wisconsin. (Bulletin of the Public Museum of the City of Milwaukee, vol. I, art. IV, pp. 251-406, pls. ix-xxv, Milwaukee, Nov. 1911.

BEECH, M. W. H. The Suk, their Language and Folklore. Introduction by Charles Eliot. Oxford, 1911.

BLAIR, E. H. Indian Tribes of the Upper Mississippi and the Great Lakes Region. Cleveland, 1912.

BUCKELEW, F. M. F. M. Buckelew, the Indian captive; or, the life story of F. M. Bucklew [*sic*] while a captive among the Lipan Indians in the western wilds of frontier Texas, as related by himself, written by S. E. Banta. Mason, Texas: Printed by the Mason Herald (1911). 112 pp., pl.

CHAILLOU, A., *et* MACAULIFFE, LÉON. Morphologie médicale. Étude des quatre types humains. Applications a la clinique et a la thérapeutique. Paris: Octave Doin et fils, 1912. 10 × 6½. (vi), 248 pp., ills.

EMMONS, G. T. The Tahltan Indians. (Anthropological Publications of the Museum of the University of Pennsylvania, vol. IV, no. 1, pp. 1-120, 19 pls., map, Philadelphia, 1911.)

EVANS, MAURICE S. Black and White in South-east Africa: A Study in Sociology. By Maurice S. Evans, C.M.G., with a Preface by Lieut.-Colonel Sir Matthew Nathan, G.C.M.G. London: Longmans, Green & Co., 1911. xviii + 341 pp. (6s.)

KRAUSE, FRITZ. In den Wildnissen Brasiliens. Bericht und Ergebnisse der Leipziger Araguana-Expedition 1908. Leipzig: R. Voigtländer, 1911. 9½ × 6¾, pp. viii, 512, plates 69, text figs. 270, maps 2.

LEMOINE, G. Dictionnaire Français-Algonquin. Quebec, 1911.

MOOREHEAD, WARREN K. Certain peculiar earthworks near Andover, Massachusetts. Department of Archaeology, Phillips Academy, vol. V, Andover, Mass., 1912. 9¼ × 6, 55 pp., 21 figs., plans.

OUTES, FÉLIX F. Variaciones y anomalías anátomo-antropológicas en los huesos del cráneo de los primitivos habitantes del sur de entro ríos. (Reprinted from *Revista del Museo de La Plata*, XVIII, pp. 53-144, 24 figs., Buenos Aires, 1911.)

RIVET, P. Sur Quelques Dialectes Panos Peu Connus. (Extrait du Journal de la Société des Américanistes de Paris. Nouvelle série, tome VII, 1910.)

— Les Langues Guaranies du Haut-Amazone. (Extrait du Journal de la Société des Américanistes de Paris. Nouvelle série, tome VII, 1910.)

— *et* BEUCHAT, H. La Famille Betoya ou Tucano. (Extrait des Mémoires de la Société de Linguistique de Paris, tome XVII.)

SANFORD, DAVID A. Indian topics; or, Experiences in Indian Missions, with selections from various sources. New York: Broadway Publishing Co. [1911]. 108 pp., ill.

SOLLAS, W. J. Ancient Hunters and their Modern Representatives. London: Macmillan & Co., Ltd., 1911. 8½ × 5¾. xvi, 416 pp., ills. (Price \$4.00.)

TOZZER, A. M. Value of Ancient Mexican Manuscripts in the Study of the General Development of Writing. Worcester, 1911. (Reprinted from the Proceedings of the American Antiquarian Society for April, 1911.)

PERIODICAL LITERATURE

CONDUCTED BY DR ALEXANDER F. CHAMBERLAIN

[NOTE. — Authors, especially those whose articles appear in journals and other serials not entirely devoted to anthropology, will greatly oblige this department of the *American Anthropologist* and the *Journal of American Folk-Lore* by sending directly to Dr A. F. Chamberlain, Clark University, Worcester, Massachusetts, U. S. A., reprints or copies of such studies as they may desire to have noticed in these pages. — EDITOR.]

GENERAL

Ameghino (F.) Orígen poligénico del lenguaje. (Arch. de Pedag., La Plata, 1911, IX, 133-192, 10 fgs.) Discusses the comparative anatomy of the speech-organs, the evolution of the *apophysis geni*, vocal or pre-human language, semi-articulate language, consonants, etc. According to A., "the babbling of infants represents perfectly the human stage immediately preceding the beginning of the faculty of articulate language"; the language of "the precursors of man" was exclusively vocal or pre-human; that of the first representatives of the human race was "semi-articulate," due to the absence of the *apophysis geniglossa*. Thus the course of the development of speech has been: Aphonic (lower creatures), emotive (animals), vocal (pre-human), semi-articulate (first men), articulate (man). For A., languages represent species and dialects varieties of them; there are species, genera, families, orders. Monosyllabic languages have preceded polysyllabic, and Chinese is "one of the most primitive tongues." This is a posthumous publication.

Anderson (J. H.) An investigation as to the most accurate method of estimating the cubic capacity of the living head, together with some remarks on the relative thickness of the cranial integuments. (J. R. Anthr. Inst., Lond., 1910, XI, 264-278.) Gives results of measurements of skulls of 40 subjects from the Melbourne hospitals

and asylums. Technique is discussed in some detail. Dr A. concludes that circumferential measurements are less preferable than diametral; Lee's formula No. 14 is better than Pelletier's diametral method; water is best to use to determine cubic capacity of skull. The correct allowance for cranial tissues seems to be: for length 9 mm., for breadth 9 mm., for height 7 mm. Bibliography of 33 titles.

— The proportionate contents of the skull as demonstrated from an examination of forty Caucasian crania. (Ibid., 279-284.) Same 40 subjects as above. Details of brain measurements. Author concludes that brain-volume probably decreases with advancing age; variation in brain-volume is compensated by an inverse variation in the amount of cerebrospinal fluid present; the dura mater does not increase in proportionate volume with increasing age, nor with size of skull, but remains constant, with a volume of from about 4.5 to 5.5 %.

Angelotti (G.) Sui solchi dell'arteria meningea media nell'endocranio. (Atti d. Soc. Rom. di Antrop., Roma, 1910, xv, 392-395, 4 fgs.) Discusses the sulci of the median meningeal artery in the endocranium—normal, abnormal, primate skulls were examined. Dr A. concludes that there exists a relationship between the development of the osseous skull and that of the endocranial arterial circulation.

Anthony (R.) A propos de l'enseigne-

- ment de l'anatomie à l'École d'anthropologie. (Rev. Anthropol., Paris, 1911, xxi, 45-55.) Sketches the history of the teaching of anatomy at the École d'Anthropologie in Paris (Broca, Manouvrier, Marey) and discusses the scope and divisions of the science.
- Anthropology at the British Association.** (Man, 1911, xi, 154-160, 171-176.) Abstracts of chief papers on physical anthropology, ethnography and ethnology, and archeology presented at meeting of 1911.
- Arrhenius (S.)** Über den Ursprung des Gestirnkultus. (Scientia, Bologna, 1911, ix, No. 2, 420-434.) Treats of the origin and development of star-worship among primitive peoples, the ancient Babylonians, Mexicans, etc. Among the lower races the moon (with its phases) is often more noteworthy than the sun, and the latter is frequently subordinate to the former in mythology, etc. The secondary place of the sun in Babylon is also remarkable. Star-worship arose out of the need of measuring time, etc.
- Astley (H. J. D.)** Cup- and ring-markings: their origin and significance. (J. R. Anthropol. Inst., Lond., 1911, xli, 83-100.) After discussing briefly various theories A. considers cup- and ring-markings "in the light which has been thrown upon them by recent research among the aborigines of Australia." and concludes that they are "totemistic signs," belonging with "the special totemistic designs of the Arunta, both on the rock-paintings, the *Churinga Ilkinia*, and the *Churinga Nanja*." In the Arunta phenomena we have "the germs of the Lingam cult." The signification of cup- and ring-markings is to be found in "the still existent habits and customs of the Arunta, etc."
- Autobiography of Dr Chas. H. S. Davis.** (Amer. Antiq., Benton Harb., Mich., 1911, xxxiii, 1-5, portr.) Sketch of life and works of associate editor of the *American Antiquarian*.
- Baglioni (S.)** Contributo alla conoscenza della musica naturale. Ricerche di analisi acustica su alcuni strumenti di popoli naturali. (Atti d. Soc. Rom. di Antrop., Roma, 1910, xv, 313-360, 23 fgs.) Gives the results of acoustic investigations of the musical instruments of primitive peoples: Marimba (4 from various parts of Africa); *sansa* (9 from the Congo country and Central and East Africa); syringe or pan-pipe (6 from various parts of Melanesia, 2 from Africa, and 1 from the *métis* and negroes of the Amazon, in Brazil). The chief facts noted are: Oscillations within wide limits; more or less strong alterations of the diverse intervals; existence of a large number of consonant intervals (all our four); tendency to approximate insensibly to the diatonic (heptatonic) scale; possibility of having contemporaneously cases of tetratonic, pentatonic, and semichromatic gammas. According to B., the fundamental principle determining and conditioning the genesis and development of our diatonic scale is essentially of a biological character. The progress of culture has induced a better selection and a more exact determination of the 7 elementary tones constituting the diatonic scale.
- Barnard-James (J.)** Nature's night lights. (Oxf. and Cambr. Rev., Lond., 1911, No. 14, 111-119.) Contains some folk-lore items concerning the will-o'-the-wisp from Argentina and Ireland (legend, p. 116). On p. 113 the author states that Argentine girls on summer evenings put a fire-fly or two under the lace of their mantillas.
- Beddoe (J.)** Sir Francis Galton, D.C.L., F.R.S. (Man, Lond., 1911, xi, 34.) Notes peculiar shape of head; lack of humor due to Quaker ancestry; inventiveness. See Gray (J.).
- Belden (H. M.)** The relation of balladry to folk-lore. (J. Amer. Folk-Lore, Lancaster, Pa., 1911, xxiv, 1-13.)
- Bernard (F.)** La Dépopulation des campagnes. (J. d. Économ., Paris, 1911, lxx, 201-215.) Author considers "la petite propriété" the best remedy against depopulation of the rural districts.
- Biasutti (R.)** Alcune osservazioni sulla distribuzione geografica dell'indice cefalico e dei principali tipi cranio-metrici. (Arch. p. l'Antrop., Firenze, 1910, xl, 353-373, 1 fg., 2

maps.) Treats of the geographic distribution of the cephalic index and the chief craniometric types. According to B., variations of cranial indices and of the consequent general architecture of the cerebral cranium, have not the significance of typical (racial) variations, but of phases of craniogenetic development which may be repeated in any human group. The study of the distribution of cranial forms does not confirm (for modern man) a very great primitiveness of the high dolichocephalic types. It is not necessary, e. g., to regard individuals with low skulls and individuals with high skulls in a negro, American or European series as typically diverse and phyletically separate, when, at least all the other somatic characters do not confirm such dimorphism. The elimination of dolichocephals from a brachycephalic series, or vice-versa, to obtain a "pure" series, is unjustifiable, unless other reasons strengthen it.

— Glaciazioni e umanità secondo il Rutot. (Ibid., 1911, xli, 188–191.) Résumés and discusses the views of Rutot on man and the glacial period, with special reference to his article in the *Bullet. de la Soc. belge de Géologie* for 1910. B. accepts the chronology of Rutot.

Boekenooogen (J.) Waar de kinderen vandaan komen. (Volkskunde, Gent, 1911, xxii, 18–24, 143–151, 193–198.) First two sections of article on folklore of "where the children come from,"—someone brings them (doctor, old woman, midwife, etc.); the stork brings them (rhymes are given, pp. 21–24); children come from cabbage and other plants, from trees, from hollow trees, from under stones, from a well or from the water-mill, out of the water, etc.

— Volkshumor in geestelijke zaken. (Ibid., 198–203.) Gives 12 items of folk-wit concerning clergymen, etc.

Bolte (J.) Neuere Märchenliteratur. Z. d. V. f. Volksk., Berlin, 1911, xxi, 180–198.) Reviews, résumés, and critiques of recent literature relating to fairy and folk-tales, etc. General (works of Swanton, v. Gennep, v. der Leyen, Goldenweiser, Sijmons, Aarne, Dähnhardt, Dubskey, Forke, Oertel,

Huet, Müller, Cosquin, v. Sydow, Zwierzina, Armesto, Jones, Wallensköld, Suchier, Johnston, Böklen, Bleich, Class, Tesdorpf, Sperbe, Lee, Barnouw, Gálos, Oliver, Jordan); European (Dähnhardt, Busch, Wossidlo, Wissner, Drechsler, Müller, Parsche, Niederberger, Boekenooogen, Langer, Trevelyan, Brusot, Colson, Sébillot, Roche, Quintin, Polívka, Afanasief, Böhm); Asia (Daniel, Wingate, Macler, Boddington and Bompas, Shakespear, Woo, Davis and Chow-Leung, Ramstedt, Nippgen, Basset, Rhodo-Kanakis, Hein); Africa (Desparmet, Basset, Artin Pasha, Frobenius, Dayrell, Tremearne, Harris, Joseph, Weule, Lademann, Werner, Jacottet, etc.).

Bond (F. D.) The lack of printing in antiquity. (Pop. Sci. Mo., Lancaster, Pa., 1911, lxxix, 584–586.) The author thinks that the main cause of the absence of printing (some sort of stamping or rudimentary printing of course existed) in antiquity, was not lack of paper, but rather the lack of a strong money-making stimulus such as existed in the fifteenth century when printing sprang up in Europe.

Bonfigli (R.) Gyus cunei e plica cuneo lingualis anterior. (Atti d. Soc. Rom. di Antrop., Roma, 1911, xvi, 107–111, 2 fgs.) Treats of the *Gyus cunei* and the *Plica cuneo-lingualis anterior* in the brains of two idiots. The superficiality of the *G. cunei* is very rare in man. The anomalies noted are interesting for comparison with corresponding phenomena in the brains of the lower races and in those of the anthropoids, etc.

Borchardt (P.) Papierabformungen von Monumenten. Winke für Reisende. (Z. f. Ethnol., Berlin, 1911, xliii, 541–545, 6 fgs.) Treats of paper moulds of inscriptions, carvings, and other monuments. The technique is described from personal experience.

Bourgin (G.) Histoire de la civilisation. (Scientia, Bologna, 1911, x, no. 3, 218–222.) Discusses recent works of de Morgan, Dussaud, Drenup, Hauser, Pignet, etc., on the early civilizations of the Mediterranean area (European, African, Asiatic).

Burger (Hr.) Demonstration eines Ap-

parates für Kopfmessungen. (Z. f. Ethnol., Berlin, 1911, XLIII, 620.) This new apparatus for head-measurement may be useful for psychiatrists and sculptors, but hardly for the anthropometrist among primitive peoples.

Burne (C. S.) The essential unity of folk-lore. Presidential address. (Folk-Lore, Lond., 1911, XXII, 14-40.) According to Miss B., folk-lore is "the learning of the people," and "it is the product of the thought, the idea of early or barbaric man, expressed in word or in action, in *belief, custom, story, song* or *saying*." It is "an entity, the product of the human mind, made up of complementary elements,—belief, custom, and story,—and liable to be influenced and varied by external circumstances." The ballad of the "Bitter Withy" (folk-lore of the willow-tree,—inextricable mingling of belief and practice, myth, song, and saying), the connection between belief and custom, "survivals," the essential solidarity of folk-lore, the racial element, etc., are discussed. In appendix are some notes on Danish dancing-ballads, the dedication of churches, etc.

Buschan (G.) Zu dem Kapitel "Mongolenflecke." (A. f. Anthrop., Brn-schw., 1911, N. F. IX, 322.) Cites letter from Dr J. G. F. Riedel of Batavia, dated from Gorontalo, Celebes, June 30, 1875, to Charles Darwin, and Darwin's reply. Dr R. notes the "blue spots" on the back above the buttocks of "the children of the primordial North Selebesian tribes." This antedates Dr Baelz's observations of 1883.

Carus (P.) Animal symbolism. (Open Court, Chicago, 1911, XXV, 79-95, 16 fgs.) Treats of the fish in ancient classic mythology, the fish-deities of Babylonia and Assyria, Dionysos, Eros and the fish, Christ as Orpheus in the catacombs, etc.

— Fish and dove. (Ibid., 212-223, 19 fgs.) Treats of these symbols,— "the sacred animals of Astarte, which reappear during the third and fourth centuries A. D. as important Christian symbols," particularly with reference to the information given by Lucian concerning the worship of Hera at

Hierapolis, the inscriptions and figures in the catacombs, etc.

— The fish as treasure-keeper. (Ibid., 314-316, 1 fg.) Treats of the Apostle Peter and the tribute-money, the ring of Sakuntala, the ring of Polycrates, the dwarf Andwari of the Edda, etc.

— The Jonah story and kindred legends. (Ibid., 271-285, 16 fgs.) Treats of Jonah and the whale, Dionysus and the dolphin, Arion and the dolphin, Melkarth and the sea-horse, coins illustrating the Greek dolphin legends, Jason and the dragon, Perseus and the great fish, Heracles and the monster, the Jonah of the Haida Indians, etc.

— Some notes on language-study. (Ibid., 292-301.) Discusses the Latin element in English; the change of languages (the author exaggerates the rate among Indian tongues), in words, meanings, pronunciation, etc.; the origin of language, etc. Dr C. thinks that "the most primitive languages appear to have been monosyllabic," and that "there was a time when the so-called roots were ideas of a general character, which were used for the purpose of communicating intentions, or requests, or declarations." They also "first denoted actions," because "language originated as an accompaniment of cooperative work of a communal activity."

— Pagan and Christian love-feasts. (Ibid., 513-524, 14 fgs.) Treats of Babylonian communion and fish sacrifice, convivial scenes depicted on tombs of worshipers of Dionysus and Mithras, a love-feast of the Fabian family, pagan love-feasts of ancient Rome, etc., the Last Supper, Christian eucharists.

— Rivers of living water. (Ibid., 636-639, 3 fgs.) Discusses the passage of the New Testament (John VII. 38), "He that believeth on me, as the scripture hath said, out of his belly shall flow rivers of living water," compared with a passage in the Buddhist sacred books. Dr C. refers them to the idea of a divine body partly of flames (or light) and partly of water, inhabited by creatures of earth, air, and water.

Chamberlain (A. F.) Some influences of race-contact upon the art of primi-

- tive peoples. (Journ. of Race Develop., Worcester, 1911, II, 206-209.) Discusses alleged influence (Mason) of introduction of iron upon Eskimo art and on the rock-pictures of Guiana (im Thurn); the effect of white contact on the art (painting on walls; carving of images, etc.) of South African negroes (Stannus), and on the drawings of Brazilian Indians (Schmidt).
- David Boyle. (Amer. Anthrop., Lancaster, Pa., 1911, N. S. XIII, 159-164.)
- Clerget (P.)** L'Urbanisme. Étude historique, géographique et économique. (Bull. Soc. Neuchât. de Géogr., Neuchâtel, 1910, XX, 213-231.) General discussion of urbanism (cities of antiquity, Middle Ages, 19th century, etc.). Religion was at the beginning of Greek and Roman cities. The northern movement of great cities is noteworthy.
- Coutil (L.)** Paul du Chatellier. (L'Anthropologie, Paris, 1911, XXII, 364-367.) Note on P. du Chatellier (d. March, 1911) with list of publications (92 studies) chiefly relating to French archeology, Finistère in particular.
- Decourdemanche (J. A.)** Du rapport légal de valeur entre l'or, l'argent et le cuivre chez les peuples anciens et les Arabes. (R. d'Éthnogr. et de Sociol., Paris, 1911, II, 160-173.) Discusses the legal relations of the precious metals in Persia, Cyzicus, Rome, Egypt, and among the Arabs. The value of gold as compared with silver was 13 to 1 (Persia, Cyzicus, Sicily, etc.); 15 to 1 (Rome, in time of dictator Fabius and down to Constantine; after Constantine to fall of empire, 14 $\frac{2}{3}$ to 1); among the Arabs 14 to 1. The value of silver as compared with copper was 128 to 1 (Egypt, Rome); 100 to 1 from reform of Diocletian; 120 to 1 after reform of Constantine.
- Deubner (L.)** Moderner Totenkult. (Arch. f. Religsw., Lpzg., 1911, XIV, 302-303.) Cites curious provisions (yearly festivals, etc.) in the wills of people dead within the last 30 years,—a sort of perpetuation of the cult of the dead.
- Dussaud (R.)** Totémisme et Exogamie. (L'Anthropologie, Paris, 1911, XXII, 295-305, 2 maps.) Résumé and critique of Frazer's *Totemism and Exogamy* (4 vols., London, 1910).
- Enrico Raseri.** (Atti d. Soc. Rom. di Antrop., Roma, 1911, XVI, 181-183.) Note on scientific activities of Prof. Raseri (d. July, 1910) with list of publications, chiefly concerned with demography.
- Fay (E. W.)** Language study and language psychology. (Pop. Sci. Mo., Lancaster, Pa., 1911, LXXIX, 369-384.) Discusses article by Prof. A. Hill in *Pop. Sci. Mo.*, for June, 1907, on "The acquisition of language and its relation to thought." According to Prof. F. "language is the expression of thought, but it is more, it is the prompter of thought." No type of language has ever been found inadequate to express the thoughts of its native users.
- Fehlinger (H.)** De l'influence biologique de la civilisation urbaine. (Scientia, Bologna, 1911, X, No. 4, 421-434.) Discusses recent literature on the subject of "physical degeneration," etc., in relation to alleged inferiority of the city-bred. F. holds that the power of resistance of uncivilized peoples has been greatly exaggerated in the past. The conclusion reached is that "it is a mistake to see in the city, the goal of modern migrations, and the center of mixture of types of different races, a danger to the progress of the development of humanity and civilization."
- Fewkes (J. W.)** The cave dwellings of the Old and the New Worlds. (Amer. Anthrop., Lancaster, Pa., 1910, N. S., XII, 390-416, 5 pls., 2 fgs.)
- Franchet (L.)** La cuisson des poteries et les phénomènes de la combustion dans l'étude de la céramique archéologique. (Rev. Scientif., Paris, 1911, 497-499.) Discusses the methods of prehistoric pottery, and particularly the black pottery,—various carboniferous varieties.
- Frassetto (F.) e Fanesi (F.)** Di un nuovo craniostato con movimento compensato. (Atti d. Soc. Rom. di Antrop., Roma, 1911, XVI, 133-136, 2 fgs.) Describes and figures a new craniostat or craniophor, with compensated movement, fitted for any orientation desired for the skull. It

is an improvement upon that of Stolyhwo.

Friedemann (M.) Die Stellung des Menschen im zoologischen System. (Ztschr. f. Ethnol., Berlin, 1911, XLIII, 114-115.) Discussion of article with this title by Friedenthal in 1910. Friedemann believes that the structure of the human brain entitles man to a special place among the Primates.

Friedenthal (H.) Die Stellung des Menschen im zoologischen System. (Ibid., 1910, XLII, 989-994.) Argues for the inclusion of man with the anthropoid apes in a sub-order *Anthropomorphae*,—from identity of blood, forms of nails and spermatozoa, hair, physiological processes of growth, etc.

Fritsch (G.) Zweite Vorlage einer Übersichtstabelle der Menschenrassen. Diskussion. (Ibid., 924-929.) Views of Ehrenreich, v. Luschan, Staudinger on Fritsch's scheme of the human races. Dr E. doubts the simple hypothesis of three stem-races—white, yellow, black. The fusion of American Indians, Mongolians, and Malays is not so justifiable as F. thinks. Dr v. L. is quite unfavorable to F.'s scheme.

— Verwertung von Rassenmerkmalen für allgemeine Vergleichen. (Ibid., 1911, XLIII, 272-280, 4 fgs.) F. emphasizes the fact that even the most striking racial characters are not absolutely constant (skull, skeleton, skin-color, eye-form, hair, etc.), but notes that this need not exclude their use in comparing the races of man. This point is discussed with special reference to hair-form (pp. 276-279) in Chinese and Hottentots. Differences that are of value as distinctions are often made of no value by pedantic devotion to averages, or by misinterpretation of variations.

Frizzi (E.) Der Miessche Schädelträger. (Korr.-Bl. d. D. Ges. f. Anthr., Hamburg, 1911, XLII, 39-40, 1 fg.) Calls attention to the cranio-phor of Mies. See *Anat. Anz.*, 1888, III, 1-4.

Gales (R.L.) Christianity and language. (Oxf. & Cambr. Rev., Lond., 1911, No. 15, 73-85.) Treats of folk-speech about God and things Christian, Christian oaths (in medieval times "extraordinarily varied and flam-

boyant"), familiar speech in relation to Jesus, the impress upon languages of the events in his life and death, the church and its rites and ceremonies, the devil, etc.

v. Gall (Freih.) Die Herkunft unseres Schrift-Alphabets. (Hess. Bl. f. Volksk., Lpzg., 1911, x, 43-46.) Based on A. J. Evan's *Scripta Minoa* (Vol. 1, Oxford, 1909.) The primitive linear writing of the ancient Cretans is the ancestor of our alphabet through a North Semitic (spread by the Phenicians) modification of it by some Palestinian genius.

van Gennep (A.) Qu'est-ce que le totémisme? (Folk-Lore, Lond., 1911, XXII, 93-104.) Discusses the views of Frazer in his *Totemism and Exogamy*. Van G. agrees with F. in separating exogamy from totemism, but not in refusing the latter all religious significance. The difficulties of deciding what "totemism" really means are emphasized. See Lang (A.), Westermarck (E.).

van Ginneken (J.) Sprachwissenschaftliche Chronik. (Anthropos, St. Gabriel-Mödling bei Wien, 1911, VI, 345-366.) Critical review of the works of Dr Wilhelm Planert, particularly his *Handbuch der Namensprache in Deutsch-Südwestafrika* (Berlin, 1905), *Die syntaktischen Verhältnisse des Suaheli* (Berlin, 1907), *Die grammatischen Kategorien in ihrem Verhältnisse zur Kausalität, Eine Untersuchung am Malayischen* (ZDMG., Bd. 60), *Makroskopische Erörterungen über Begriffsentwicklung* (1910) from the point of view of comparative philology and psychogenetic linguistics, giving his own theories, etc., on the questions involved.

Giuffrida-Ruggeri (V.) La quistione dei pigmei e le variazioni morfologiche dei gruppi etnici. (Arch. p. l'Antrop., Firenze, 1910, XL, 289-315.) Treats of pigmies and the morphological variations of ethnic groups (views of Schmidt, Hagen, Stratz, Sanson, etc.), particularly the theory held more or less by Schmidt, Hagen, Klaatsch, etc., that the primitive human race (or *Urrasse*) is "a race corresponding to the infantile stage of more evolved ontogenetic development." According to G.-R., the

pigmies may be a primitive human group more or less ecumenic, but to consider them the basis of all others is going too far. The other characters, outside of small stature, are not so convincing, as, e.g., Schmidt thinks. The two types found by Hagen among the Kubu, and Bataks, are not, as he maintains, two human varieties, but the two extremes of a well-known oscillation. Pigmies and tall types are varieties of one and the same species of man, and one need not wonder at their having about the same proportions as the taller types, however much this fact may contradict the so-called fundamental biogenetic law.

Gordon (G. B.) The functions of the modern museum. (U. of Penn. Mus. J., Phila., 1911, II, 2-5.) Argues that "the principal function of the modern museum is to promote the increase of knowledge and the cultivation of taste." It is the instrument by which "human documents" are to be saved for the uses of science and of posterity. It is "from every point of a view, a necessary instrument in modern education."

Gray (J.) Sir Francis Galton, M.A., D.C.L., F.R.S., etc. (Man, Lond., 1911, XI, 33-34, portr.) Brief account of life (1822-1911) and works of "the father of eugenics." See Beddoe (J.)

— **John Beddoe, M.D., LL.D., F.R.S., F.R.C.P., etc.** (Ibid., 151-153, portr.) Brief account of scientific activities, with list of publications (1853-1910), of the late British anthropologist (b. 1826, d. 1911). His last work was an autobiography, *Memories of Eighty Years* (Lond., 1910). Dr B. was eminent as a physical anthropologist (stature, color of hair and eyes, craniology, etc.).

— The differences and affinities of paleolithic man and the anthropoid apes. (Ibid., 117-120, 1 fig.) Treats of dimensions of humerus, femur and tibia in Neandertal and Aurignac man, the gorilla, the orang, and the chimpanzee. According to G. "the Aurignac (and Galley Hill) man differentiated himself from the chimpansoids at an earlier epoch than the Neandertal man separated from the gorilloids." The brachycephalic

racess of Asia may have developed from the orangoids. G.'s theory of the descent of man agrees with that of Klaatsch, except that the chimpanzee is substituted for the orang.

Guérard (A. L.) English as an international language. (Pop. Sci. Mo., Lancaster, Pa., 1911, LXXIX, 337-345.) Prof G. sees some difficulties in the progress of English and suggests that French "is stronger than most Americans believe." And "if French or English will not do, why not try Esperanto?"

Hahn (E.) Die Erkenntnis des heutigen Volkslebens als Aufgabe der Volkskunde. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 225-233.) Discusses the knowledge of modern folk-life as the subject of folk-lore. Folk-lore is "ethnology applied to our own people." Important for folk-lore is the age of youth so closely connected with tradition.

— Die Entstehung der Bodenwirtschaft. (Scientia, Bologna, 1911, IX, NO. 1, 139-153.) Discusses the origin of agricultural economy: The three-stage theory, the sex-division of labor, the rôle of woman in the development of agriculture, etc. In human history economic work has been furnished most often by woman, in the beginning where only human labor has been present,—"hoe-culture," "gardening," etc., as with the modern European peasant woman today in certain areas. Plough-culture means the addition of other than human labor,—that of domestic animals.

Harlan I. Smith: Explorer in archeology. (Amer. Museum J., N. Y., 1911, XI, 301-302.) Outlines past activities of Prof. Smith, recently appointed Archeologist to the Canadian Government and Curator of the Victoria Museum.

Harrington (J. P.) Franz Nikolaus Finck. (Amer. Anthropol., Lancaster, Pa., 1910, N. S. XII, 724-728, portr., bibl.)

Hertel (J.), Bolte (J.) u. Andrae (A.) Zur Sage von der erweckten Scheintoten. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 282-285.) Cites additional literature concerning the tale of the awakened dead woman, from India, Italy, Spain, Germany, France, etc.

Hervé (G.) Un cas de bipartition com-

- plète du basioccipital, le basiotique d'Albrecht découvert (otosphénal) par Étienne Geoffroy Saint-Hilaire. (Rev. Anthropol., Paris, 1911, XXI, 98-101, 1 fig.) Cites a case of complete bipartition of the basi-occipital (Albrecht's *basiotic*) and points out that the peculiarity had been already observed and named by St Hilaire,—*otosphenal*,—in his *Philosophie anatomique*.
- Le professeur Alexandre Schenk. (Ibid., 43-44.) Brief account of life and activities of the Swiss anthropologist (1874-1910).
- Charles Daveluy. (Ibid., 241-244, portr.) Sketch of life and scientific activities of C. Daveluy (1829-1911), assistant director of the École d'Anthropologie 1900-1910, honorary director 1910-1911. He was a specialist in the Semitic languages.
- Hoernes (M.)** Die ältesten Formen der menschlichen Behausung und ihr Zusammenhang mit der allgemeinen Kulturentwicklung. (Scientia, Bologna, 1911, X, No. 3, 132-142.) Treats of cave-dwellings, round-dwellings, four-cornered houses (megaron-type, etc.) in various parts of the world, their evolution, relation to one another, etc. Tree-houses and dwellings in hollow-trees can never have been universal primitive forms of habitation. Cave-dwelling, more extended in use and distribution, came nearer being such. The late neolithic hunting tribes of the close of the glacial age had both caves and huts,—the latter of the four-cornered type, for the round-dwelling comes later, and when met with among hunter-peoples is open to the suspicion of having been borrowed from other cultures. Certain types of dwelling have apparently grown up under controlling influences of a local environment. Independent invention is not absolutely to be rejected here and there.
- von Hornbostel (E.)** Über ein akustisches Kriterium für Kulturzusammenhänge. (Z. f. Ethnol., Berlin, 1911, XLIII, 601-615.) Treats of the physical-acoustical (measurement of tones) as a criterion of culture-relations. Investigates in this way the question whether the African xylophone is autochthonous or imported from southeastern Asia, and the question of the origin and distribution of the pan's pipe. The results favor introduction of the xylophone from southeastern Asia, and of culture-relations in the matter of the spread of the pan's pipe.
- Hough (W.)** Edward Palmer. (Amer. Anthropol., Lancaster, Pa., 1911, N. S. XIII, 173.)
- Jacoby (A.)** Der Ursprung des Judicium offae. (Arch. f. Religsw., Lpzg., 1910, XIII, 525-566.) Treats of the origin of the *judicium offae* (ordeal by which the accused had to swallow a quantity of bread or cheese, or be considered guilty). J. rejects the origin offered by F. Patella in his *Le ordalie*, from India, and Kober's theory of provenance from England, and seeks to show that the custom is of Christian origin, and stands in certain relationship with the religious and other ceremonials of the encharistic type. See also p. 634.
- Janiewitsch (J.)** Totenmaske bei den Wogulen. (Ibid., 626.) Note on the covering of the face with deer-skin, regarded by some as a death-mask,—this is the opinion of Wisocki (1908).
- Karutz (—)** Über Kinderspielzeug. (Z. f. Ethnol., Berlin, 1911, XLIII, 237-239, 5 figs.) Treats of toys of the type of the "bean-shooter" (American Indian, African negro, North Germany) and "buzzer" (American Indian, Europe, Africa),—these are possibly almost universal in their distribution. A pop-gun from Togo is also figured and described. (Koch reports it also from Brazil.)
- Kelsey (F. W.)** The tragedy at Cyrene. (Bull. Amer. Arch. Inst., Norwood, Mass., 1911, II, 111-114, portr.) Sketches life and activities of H. F. De Cou, the archeologist, killed by Arabs, March 11, 1911.
- Kluge (F.)** Aufgabe und Methode der etymologischen Forschung. (Neue Jahrb. f. d. Klass. Alt., Lpzg., 1911, XXVII-XXVIII, 365-376.) Discusses, with numerous examples, the field and method of etymological investigation, particularly in German and related languages.
- Zur Geschichte des Brutofens. (Mitt. d. Anthr. Ges. in Wien, 1910, XI, 195-196.) Notes on the history

- of the incubator for hatching hens' eggs. The German word *Brutofen* dates only from the 18th century. The evidence traces the invention itself back to ancient Egypt.
- Kroeber (A. L.)** The morals of uncivilized peoples. (Amer. Anthropol., Lancaster, Pa., 1910, N. S. XII, 437-447.)
- Kunike (H.)** Das sogenannte "Männerkindbett." (Z. f. Ethnol., Berlin, 1911, XLIII, 346-563.) Treats, with bibliography (pp. 560-563), of the literature concerning the *couvade* in Europe (Mediterranean region), Asia (China, Miaotse; India, Dravidians), Indonesia and Polynesia (Island of Buru; Dayaks of Borneo), Africa (Congo country), America (Island Caribs, Caribs of mainland, Aravaks and other tribes of Venezuela, Guiana, Brazil, etc.; some tribes of New Mexico and California). Northern South America seems to be "the classic land of the *couvade*,"—there are two other notable *couvade*-areas, one in southeastern Asia, the other in southwestern Europe (cf. the Basques). The author warns against unjustifiable generalization. There are two types of the *couvade*, one of which is possibly an *imitatio naturae*, a *couvade* proper; the other (the South American sort) may in some cases be explained as a "temporary union with the father" for the child,—or something very like it. This may have been connected with the transition from matriarchy to patriarchy. Possibly type first has grown up out of type second.
- de Lanessan (J. L.)** Le transformisme et le créationisme pendant le Moyen Age et la Renaissance. (Rev. Anthropol., Paris, 1911, XXI, 197-216.) Sketches the history of the doctrines of transformism and creationism during the Middle Ages and the Renaissance: St. Augustine, the Arabs, Italian and French anatomists, Servetus, Harvey, Borelli, P. Belon, B. Palissy, van Helmont, etc.
- Lang (A.)** Totemism and exogamy. (Folk-lore, Lond., 1911, XXII, 91-93.) Treats of Frazer's theories, etc. and Mr Thomas' review of Frazer's work. L. holds that "the present Arunta method of obtaining totems is not early, but recent, and has not yet wholly destroyed the usual method by which each totem is confined to a single phratry." See van Gennep (A.), Westermarck (E.).
- Linard (J.)** Le monothéisme primitif d'après Andrew Lang et Wilhelm Schmidt. (Rev. de Philos., Paris, 1911, Nos. 9-10, 390-416.) Résumés and discusses recent publications of Lang and Schmidt relating to "primitive monotheism."
- Lowie (R. H.)** A new conception of totemism. (Amer. Anthropol., Lancaster, Pa., 1911, N. S. XIII, 189-207.)
- von Löwis of Menar (A.)** Nordkaukasische Steingeburtssagen. (Arch. f. Religsw., Lpzg., 1910, XIII, 509-524.) Treats of North Caucasian parallels of the Phrygian myth of the birth of man from stones, etc. Abstracts of such myths from the Kabardians. Chechenzes, Ossetes, etc., are given,—these are in addition to those recorded by N. S. T. in the *Etnograficeskoje Obozrénije* for 1908. These tales are characterized by the most animated and objective telling of the process of birth from the stone. In one tale a dream-motive appears; another interesting feature is the fecundation of the stone by human semen,—the magic stone is assigned female-anthropomorphic qualities, etc. Comparisons with myths from Asia Minor, with certain myths regarding Adam and Eve, the origin of Anti-Christ (e. g. story of Armilus), the Haitian myth of the four brothers, etc.
- MacCurdy (G. G.)** Anthropology at the Providence meeting, with Proceedings of the American Anthropological Association for 1910. (Amer. Anthropol., Lancaster, Pa., 1911, N. S. XIII, 99-120.)
- Machabey (A.)** Un point d'histoire musicale. (Revue Musicale, Paris, 1911, XI, 88-93.) Emphasizes the value of the "gnostic papyri" for the interpretation of the history of music. Interesting, e. g., are the correspondences of the vowels to divinities, planets, cardinal points, notes of the musical scale; the musical translation of magical formulae; Oriental origin of certain aspects of the Christian liturgy; general employ-

- ment in the Orient and in Egypt of a pre-Christian heptatonic gamut.
- Maeterlinck** (L.) *Folklore et gastronomie*. (Volkskunde, Gent, 1911, xxii, 208-210.) Proposes a section of folk-foods and folk-cookery for the Gent exhibition of 1913.
- Mahoudeau** (P. G.) *La place zoologique de l'homme*. (Rev. Anthropol., Paris, 1911, xxi, 365-382.) Discusses the place of man in the animal series. Traditions of primitive peoples as to animal ancestors; opinion of ancient Greeks, Linnaeus, Buffon, Tyson, Lamarck, Saint-Hilaire, de Quatrefages, Pruner-Bey, Letourneau, Dally, Huxley, Broca, etc. Modern opinion seems to be that "man is simply a species of the anthropomorphic type," or, as La Mettrie said in the 18th century and Friedenthal repeats in the 20th, "man is a species of ape."
- Meillet** (A.) *Différenciation et unification dans les langues*. (Scientia, Bologna, 1911, ix, No. 2, 402-419.) Discusses the tendencies toward differentiation (local innovations, sex distinctions, professional variations, religious differences,—the Todas, numbering but 800 souls, have three special religious languages, an *argot*, and a social dialect; changes due to isolation, removal of restraint as in case of break up of Roman empire, substitution by conquest, race-contact), and unification (spread of languages by conquest, extension of culture, etc.; creation of common tongues within a given area, e. g., modern French, German, English; influence of literature, etc.; unity of language not necessarily implies unity of race-origin). The tendency toward unity of speech where unity of civilization exists is very strong, and increases with modern progress.
- Mercante** (V.) *Florentino Ameghino. Su vida y sus obras*. (Arch. de Pedagog., La Plata, 1911, ix, 93-132, portrait. Sketch of the life, scientific activities, publications (bibliogr., pp. 113-123), funeral, etc., of F. Ameghino (1854-1911), the celebrated Argentinian paleontologist and anthropologist.
- Mogk** (E.) *Volkstümliche Sitten und Bräuche im Spiegel der neueren religionsgeschichtlichen Forschung*. (Neue Jahrb. f. d. Klass. Alt., Lpzg., 1911, xxvii-xxviii, 494-505.) Treats of folk-lore and folk-customs from the point of view of comparative religion and ethnology. Dr M. recognizes a primal period of vitalism (fetish, magic), a next stage of soul-belief (spirits, ancestor cult), a third stage (anthropomorphism, man-like deities, temples, statues, etc.). The Teutons when they appeared in history were in this third stage, but possessed also much of earlier origin.
- Morselli** (E.) *Etnologia ed etnografia*. (Arch. p. l'Antrop., Firenze, 1911, xli, 13-39.) Discusses the significance and relations of ethnology and ethnography as divisions of anthropology according to various authorities (Prichard, Hovelacque, von Hellwald, Ratzel, E. Schmidt, R. Martin, Achelis, Günther, Kaindl, Tylor, Brinton, M. Antón, De Hoyos Sáinz, Papillault, etc.). According to Prof. M., *ethnology* is "the study of races understood and treated from a point of view predominantly naturalistic or zoological"; and *ethnography*, "the study of peoples considered rather from a geographical-historical aspect."
- de Mortillet** (A.) *Survivance usuelle de la pierre*. (Rev. Anthropol., Paris, 1911, xxi, 81-97, 6 figs.) Treats of three phases of the survival of the use of stone: Persistence (the more or less prolonged real employment), habit and atavism, tradition; the survival of stone weapons (e. g. axes among vikings, Saxons, etc.), stone tools (harrow used in Rumania 25 years ago had stone "teeth,"—cf. the classic *tribulum*; stone saws in bronze age; hafted stone used to bark trees in Ardennes as late as 1858), etc.
- Niceforo** (A.) *Contributo allo studio della variabilità di alcuni caratteri antropologici*. (Riv. di Antrop., Roma, 1911, xv, 41-58.) Treats of the variability of anthropological characters: Methods and considerations of technique (pp. 41-53), variability and age, left and right, cranial measurements, etc. The order of greatest variability is weight, abdomen, thorax, limbs (upper and lower), trunk, head. The variability of stature is comparatively small. A

composite anthropometric measurement is less variable, in general, than each of its components. A minimal variability is given by the circumference of the skull and by capacity. The variability of the frontal bone is great.

Nilsson (M. P.) *Der Ursprung der Tragödie*. (Neue Jahrb. f. d. Klass. Alt., Lpzg., 1911, XXVII-XXVIII, 609-642.) First part, treating of the various theories as to the origin of tragedy (Aristotle, the ethnological hypothesis, Ridgeway, Schmid, Dieterich, the mourning hypothesis), particularly the theory of its origin from mourning, which is the view adopted by the author and discussed at some length (pp. 618-642).

Paolo Mantegazza. (Arch. p. l'Antrop., Firenze, 1910, XL, 483-500, portr.) Proceedings of special meeting in memory of P. Mantegazza, the well-known anthropologist, psychologist, etc. Addresses on his life, activities, and publications by Modigliani, Giuffrida-Ruggeri, Mochi, Loria.

Papillault (G.) *Galton et la biosociologie*. (Rev. Anthropol., Paris, 1911, XXI, 56-65, portr.) Treats of life, scientific activities, and publications of Sir Francis Galton (1822-1911), the "father of eugenics."

Patten (S. N.) The laws of environmental influence. (Pop. Sci. Mo., Lancaster, Pa., 1911, LXXIX, 396-402.) According to Prof. P., the actual problems of today are problems of degeneration,—“we must get rid of the subman before we can rise to the superman's level”; and “the subman is made by environment as truly as the superman will be made by heredity.”

Peacock (M.) Religious dancing. (Folk-Lore, Lond., 1910, XXI, 515.) Note on heathen cultus-dances surviving in Christian lands (e. g. the Bacchic performances in connection with the Madonna in the Posili grotto near Naples on the night of the 7th-8th Sept.).

Pearson (K.) On the value of the teachers' opinion of the general intelligence of school children. (Biometrika, Cambridge, 1910, VII, 542-548.) From consideration of the tables and reductions of H. Gertrude Jones

(data are from schedules filled in by over 20 Aberdeen teachers concerning 249 boys from 4 different schools, ages 6 to 14,—in groups according to excellent, good, moderate, dull), Dr P. concludes that there is “a substantial correlation between teachers' estimate of general capacity and examination test.” Thus such estimate “is not a purely idle character, wholly valueless owing to the personal equation of the teacher.”

Peirce (G. J.) Civilization and vegetation. (Pop. Sci. Mo., Lancaster, Pa., 1911, LXXIX, 328-336.) Points out great destruction of vegetation due to agriculture, fires, certain forms of industry, smoke, etc. Foresees establishment of new balance, through improved methods of manufacture, etc.

Perdrizet (P.) La miraculeuse histoire de Pandare et d'Echédore, suivie de recherches sur la marque dans l'Antiquité. (Arch. f. Religsw., Lpzg., 1911, XIV, 54-129, 1 pl.) In connection with the story of Pandarus, the Thessalian, and the transference of the stigmata on his forehead to Echédorus, the author discusses in detail the meaning, etc., of *stigmata*, *grammata*, *marks* and *signs*, *tattooing*, *signaculum* of confirmation, mark of the *miles Christi*, sign of the hand and marked hands, the military sign, etc.,—cauterization, scarification, tattooing in various forms and fashions to mark slaves and property, as a religious token, as a mark of soldiers, etc. Branding has but recently disappeared from the penal codes of Christianity. Tattooing was much in vogue in pre-Hellenic Greece, but not favored in classic times. Marking cattle by branding was wide-spread in antiquity. Slaves and recruits were often “marked” (the military mark was of religious origin in all probability, a special variety of the religious stigmata, and was derived from Syria). The text of the story is from the stela of Epidaurus. This monograph contains much valuable information.

Pessler (W.) System der Ethno-Geographie. (Mitt. d. Anthropol. Ges. in Wien, 1910, XL, 191-194.) Outlines the matter of ethno-geography: (1) Somatic (body and parts, organs,

- etc.), (2) mental, (3) linguistic, (4) material culture (house, implements, utensils, etc.). There are three primary ethnogeographical questions: How is each particular folk-character distributed, both with regard to its external and its internal limits? How old are the limits? What are the relations to one another of the limits of folk-characters, and how are coincidences and deviations to be explained?
- Pfeiffer (L.)** Beitrag zur Kenntnis der steinzeitlichen Fellarbeitung. (Z. f. Ethnol., Berlin, 1910, XLII, 839-895, 110 fgs.) Detailed discussion of the preparation of skins in the stone-age, the implements, etc., employed, the further uses of the prepared skin, leather, etc. The subject is illustrated by numerous references to the finds at Schussenried, Lindenthal cave, Taubach, Krems, in Scandinavia, etc., and to the Eskimo and American Indians. The so-called "woman's knife" and its ancient representatives are considered at length and a list given (pp. 889-895) of places (pre-historic) and modern tribes, etc., among which the "woman's knife" and certain other types have been found.
- Poniatowski (S.)** Über den Wert der Indexklassifikation. (A. f. Anthrop., Brnschw., 1911, N. F. X, 50-54.) After a historical sketch of the classifications of cephalic indices and a discussion of their value, P. concludes that "the abolition of index-classification would mark a great step in advance in anthropology." Literalism in the use of such class-terms has led to very many errors; so, too, the dependence upon averages.
- Proceedings of the Anthropological Society of Washington.** (Amer. Anthrop., Lancaster, Pa., 1911, N. S. XIII, 313-319.)
- Puccioni (N.)** Ricerche sui rapporti di grandezza tra corpo e ramo ascendente nella mandibola. (Arch. p. l'Antrop., Firenze, 1911, XLI, 83-152, 6 fgs.) Treats of the relations in size between the body and the ascending ramus of the lower jawbone in skulls of numerous races and peoples, in children and anthropoids. P. considers that there exist in these relations "ethnic differences indicating true ethnic mandibular types"; the
- "fossil" jawbones of Europe are morphologically one with those of modern man; those of the anthropoids present a morphology different from that of man; the jawbone of women and of children have certain characters in common and they are markedly different from those of adult males. Six ethnic types are noted: Caucasoid (finest), Australoid, Mongoloid, American, Negroid and Hottentot. The Australoid, from one side, the American from another, are near the Caucasoid; the Hottentot and the Mongoloid farthest from it; the Negroid occupies a central position.
- Reche (O.)** Längen-Breitenindex und Schädlänge. (A. f. Anthrop., Brnschw., 1911, N. F. X, 74-90, 7 fgs.) Discusses in detail, with tables of measurements, etc., the cephalic index and length of skull (a new index, the length-index of the occiput, is introduced, by which "it is possible to distinguish short and long skulls without reference to measurement of breadth,"—low indexes indicating skulls with short and high indexes skulls with long occiput).
- Risley (H.)** Presidential Address. The methods of Ethnography. (J. R. Anthrop. Inst., Lond., 1911, XLI, 8-19.) Gives account of experiences with Santals and Bhumijs and efforts to secure an anthropological survey of India (results since 1901),—very much has been done in the way of anthropometry. The intention of the Government was that the ethnographic portion of the survey should be finished in about five years at a cost of £10,000, but delays and interruptions have taken place. Many valuable monographs have already been published.
- Rivet (P.)** Gaspar Marciano. (J. Soc. d. Amér. de Paris, 1910 [1911], N. S. VII, 259-260.) Brief account of life and works of Dr Marciano (1850-1910), the Venezuelan anthropologist and archeologist, known for his studies of the history and pre-history of the Indians of this region. At the time of his death he was preparing a *Histoire précolombienne du Vénézuéla*.
- Romagna-Manoia (A.)** Sulle variazioni delle docce dei seni venosi poste-

riori della dura madre. (Atti d. Soc. Rom. di Antrop., Roma, 1911, xvi, 137-141, 4 fgs.) Treats of the variations of the ducts of venous sinuses of the *dura mater*, with particular reference to Le Double's *Traité des variations des os du crâne de l'homme* (Paris, 1903), etc. The relation between the development of the osseous skull and that of the endocranial arterial circulation is probably equivalent to that existing between the development of the osseous skull and the posterior venous sinuses of the *dura madre*.

Rutot (A.) Essai sur les origines et sur le développement de l'humanité primitive. (Rev. de l'Univ. de Bruxelles, 1911, 241-276.) Discusses the origin and development of man and the varieties of man, in prehistoric Europe in particular. R. recognizes two human types the *Homo primigenius* (older, more homogeneous) and the *Homo sapiens* (later, heterogeneous). The first dolichocephalous, prognathous, with retreating forehead and chin, no longer having living representatives; the second dolichocephalous, mesaticephalous, or brachycephalous, with well-developed forehead and chin, etc., complicated and diversified in its evolution, influenced by *métissages*, presenting high and modern characters often preserved in the races of today. The oldest precursor of man and the anthropoids was probably a late Eocene development from the Prosimians, which gave rise to two branches leading on the one hand to the modern Gibbons and on the other to the *H. primigenius*. The oldest of the monkeys properly so-called, the *Oreopithecus*, dates from the lower Pliocene. Up to the close of the Quaternary the *H. primigenius* was the only representative of the human race. Pre-eolithic and eolithic implements are recognized by Rutot. After this came the *H. sapiens* and the improvement of human intelligence and culture down to the present.

Rutz (O.) Der Gemütsausdruck als Rassenmerkmal. (Anthropos, St Gabriel-Mödling bei Wien, 1911, vi, 147-173, 302-317, 8 fgs.) According to Dr R. every individual possesses a musculature revealing itself in the

whole bodily posture and constituting the expression of type of temperamental life,—speech, music, song. There are 4 such types (each with a "cold" and a "warm" variety),—Teutonic, Italian, French, and another not yet practically in evidence. These are discussed in detail, with examples from the literature of various European peoples. The application of these types to Asiatic, African, and American native peoples is also briefly considered. Hindus and Japanese belong to the Italian type, as do the Annamese; Mongols to the French type; certain African peoples and Malays to the French type; Australians and South Sea Islanders to this type also, together with the American Indians.

Sanctity of tabu (The). (Open Court, Chicago, 1911, xxv, 155-175, 22 fgs.) Treats of the *tabu* of animals (the *tabu* remains often when the reason for their holiness has long disappeared). The Semitic *tabu* of swine, ancient Greek sacrifice of pig in the Elusinian mysteries, the Thesmophoria, etc.; the bear among the Ainu, certain American Indian tribes; the fish in Oriental and ancient classical mythology, among the Polynesians, Melanesians, American Indians, etc. The inheritance of our religion from pre-Christian cults is very great.

Schüick (A. C.) Das Schulterblatt des Menschen und der Anthropoiden. (Mitt. d. Anthr. Ges. in Wien, 1910, xl, 231-237, 9 fgs.) Treats of the form of the shoulder-blade, ossification, dimensions, angles, indices, *spina*, etc., in man and the anthropoids. The most removed from man, in all respects is the gibbon. The scapular index of the chimpanzee approaches nearest that of man.

Scripture (W.) The sounds of "ch" and "j." (Pop. Sci. Mo., Lancaster, Pa., 1911, LXXIX, 350-354, 6 fgs.) Based on data from a voice-recording apparatus. The conclusion reached is that "ch" (č) and j (J) are to be recognized as individual sounds quite distinct from the compound sounds *tsh* and *dsh*."

Sera (G. L.) Un nuovo orbitostato. (Atti d. Soc. Rom. di Antrop., Roma, 1910, xv, 309-312, 2 fgs.) Describes a new orbitostat, an improvement on

that of Broca, adapted to quicker use, and easier to manipulate.

Sergi (G.) Paolo Mantegazza. (Ibid., 423-425.) Brief appreciation of scientific activities, publications, etc.

— Uno strumento per misurare nel cranio umano l'altezza auricolare-bregmatica. (Ibid., 1911, xvi, 143.) Figures and describes an instrument for measuring the auricular-bregmatic height of the skull.

— Francis Galton. (Ibid., 179-181.) Brief account of publications, scientific activities, etc.

— Ottolenghi (S.) e Montesano (G.) Cartella biografica per minorenni corrigendi. (Ibid., 59-73.) Gives (pp. 66-73) a schedule for the examination-record of juvenile offenders, containing somatic, psychological, experimental, and medical-clinical sections, compiled by the three authors.

— (S.) Variazioni di sviluppo del lobo frontale nell'uomo. (Ibid., 1910, XL, 361-372.) Treats of the development of the frontal lobe in Herero, Hindus, Javanese, Japanese, Sudanese, and Ovambo (measured by the author) compared with Germans (Tedeschi) and Italians (Chiarugi),—also Italian new-born infants. According to Dr S., the relative development of the frontal lobe has a special formula for each ethnic group, particularly if we consider the lobe as divided into two zones, upper and lower. The predominance in the development of the frontal lobe over the parieto-occipital does not suffice to distinguish man from the primates or higher from lower human races. The progressive elements of the human brain must be sought in other morphological (macroscopic or microscopic) characters.

— Sui solchi temporo-occipitali inferiori nel cervello dell'uomo. (Ibid., 1911, xvi, 123-131.) Treats of the low temporal-occipital sulci of the brain in the anthropoids, in the Herero, etc.

Seyffert (C. A.) Das Messer. Eine kulturhistorisch-ethnographische Skizze. (Archiv f. Anthrop., Brnschw., 1911, N. F. X, 91-150, 9 pls., 7 fgs.; Bibl., 150 titles.) This monograph on the culture-history and ethnography of the knife ("one of the primitive possessions of man") treats of knives

of animal materials (teeth, claws, nails; horn, bone, etc.; shell) of vegetable material (wood, bamboo), of mineral, etc. (stone, flint, obsidian, slate, glass), of metal (copper, bronze, iron,—prehistoric and modern; the knife as weapon among modern peoples (dagger, throwing-knife, for striking or cutting, sword-knives, etc., hunting-knife); the knife as tool and implement (in cult and ceremony; sacrificial and circumcision knives, etc.; knives for cutting, whittling, shaving, "woman's knife"). The knife is widespread, "uralt," and some of its forms have been independently evolved in different regions of the globe. Knives survive in ritual and cult use, when they have disappeared from ordinary employment.

Shufeldt (R. W.) Nakedness and public morality. (Amer. J. Dermat., St. Louis, 1911, xv, 596-601, 3 fgs.) Résumés and discusses Dr Havelock Ellis' chapter on "Sexual Education and Nakedness" in his recent work *Sex in Relation to Society*. Advocates "the accustoming of adults to the sight of the nude form and inculcating in them the esthetic sense of its beauty, its value, and its power to elevate the entire nature of man, and act as a spur to his achievement in all that pertains to refinement and morality,"—and letting this knowledge pass to the children.

Simmel (G.) Der Begriff und die Tragödie der Kultur. (Logos, Tübingen, 1911, II, 1-25.) S. concludes that, unlike the old Franciscans, who declared of themselves that *nihil habentes, omnia possidentes*, the men and women of rich and overburdened civilizations must say of themselves *omnia habentes, nihil possidentes*.

Smiley (J. K.) Religious sacrifices. Open Court, Chicago, 1911, xxv, 96-122.) Treats of origin, development, and decline of this custom. Primitive peoples (Indonesians and Polyne-sians, Africans, American Indians), civilized peoples of antiquity, Japanese, Chinese, etc., are referred to. S. believes that sacrifice grew up in connection with spirit-lore,—human and animal both.

— Idols and fetishes. (Ibid., 455-470, 540-571, 7 fgs.) Treats in similar fashion the question of idol-wor-

ship, fetishism, etc. S. believes that "idolatry and fetishism . . . even in the most diverse parts of the world . . . are essentially the same, both in their origin and character." They are, indeed, "merely objects for spirits to inhabit." According to S., idols "probably developed in the middle stages of savagery, and abounded in the higher stages of savagery, and on the lower levels of civilization; as intelligence increases they are discarded." Idolatry, unknown to savages, will disappear with a high civilization.

Sollas (W. J.) The evolution of man. (Scientia, Bologna, 1911, ix, no. 1, 118-138.) Treats of Magdalenian, Solutrean, Mousterian man and their relations to modern man,—the development of skull and brain are considered in particular. According to Dr S., "the primitive inhabitants of France were distinguished from the highest civilized races, not by a smaller, but by a larger cranial capacity; in other words, as we proceed backwards in time the human brain increases rather than diminishes in volume." At the same time "as we proceed backwards man departs farther from the ape in the size of his brain, but approaches nearer to the ape in the characters of his bodily framework." There is a serial relationship in the matter of brain between "the ancestral lemurs, the lower catarrhine monkeys, the man-like apes, and, finally, man himself." Human evolution was accomplished, probably, "under the influence of severe competition," but "man seems to have attained, at a comparatively early stage, the full powers of his intellect," and "his subsequent advance has been due less to its continued development than to its constant exercise, and especially to the perfection of speech, its great instrument." Even since its first appearance the human race "has given birth to great discoverers and great discoveries."

Stratz (C. H.) Grösse und Proportionen der menschlichen Rassen. (Archiv f. Anthropol., Brnschw., 1911, N. F., x, 226-232, 4 fgs.) Discusses stature and bodily proportions in the protomorphic race (6 to 7 head-

heights; excessive length of arms), black race ($6\frac{1}{2}$ to $7\frac{1}{2}$ head-h., excess of arm and leg-length), yellow race ($6\frac{1}{2}$ to $7\frac{1}{2}$ head-h., short leg-length), white race (7 to 8 head-h., normal proportions). On p. 231 is given the photograph of a fisher-maiden of the Island of Urk, with a stature of 1,808 mm., head-height 196 mm., giving a proportion of 9.2 head-heights,—a unique measurement.

Strauch (C.) Geschlechtsteile eines Zwitters. (Ztschr. f. Ethnol., Berlin, 1911, XLIII, 140.) Brief note on sex-organs of hermaphrodite (passed for woman).

Toldt (C.) Emil Zuckerkandl. (Mitt. d. Anthr. Ges. in Wien, 1911, xLI, 154-156.) Sketch of life and scientific activities, publications, etc., of the anthropologist, E. Zuckerkandl (1849-1910). His more important works related to craniology and physical anthropology.

— Augustin Weisbach. (Stzgb. d. Anthr. Ges. in Wien, 1910-1911, 9-11.) Brief sketch of scientific activities of Dr A. Weisbach, the jubilee of whose doctorate occurred Feb. 9, 1911. W. was the first systematic anthropologist in Austria. He devoted himself also to craniology in particular.

Tschöcke (A.) Die Entstehung der Unsterblichkeitslehre. (Ztsch. f. Relig. Psych., Leipzig, 1911, v, 1-24.) Attempts to give a "genetic" theory of the origin of the belief in immortality. The Vedda treatment of the dead represents the lowest stage; the burial-ceremonies of the South African Bushmen come next; the cult-acts of the Wadjagga, etc., are higher still, etc.

Verneau (R.) Le Dr F. Delisle. (L'Anthropologie, Paris, 1911, xxii, 243-244.) Brief account of life and works of Dr F. Delisle (d. March, 1911), author of several works on cranial deformation, on the stone-age in the Congo, on the orang-utangs of the Jardin d'Acclimatation, etc.

— Alphonse Pinart. (Ibid., 244-245.) Brief sketch of life and works of A. Pinart (1852-1911), Americanist, author of numerous articles, monographs, etc., on the natives of Alaska and the Aleutian Is., the Indian tribes and languages of Panama, etc.

- Le colonel Duhoussset. (Ibid., 245-246.) Brief account of scientific labors of Col. Duhoussset (1823-1911), author of various anthropological articles on the tumuli and gipsies of Persia, the Kabyles, etc.
- Vignoli (T.)** Sulla antologia sociale. (Rend. R. Ist. Lomb., Milano, 1911, II. S., XLIV, 226-229.) Compares the internal and external dynamics of animal and human societies,—e. g. the garden spider, etc. The author's book on this subject is soon to be published.
- Vinson (J.)** La grammaire. (Rev. Anthropol., Paris, 1911, XXI, 4-17.) Treats of *grammar* as "the study of the elements of language: Phonetics, morphology, semantics, syntax." According to V., "with a grammar thus methodically made, the theoretic or practical study of any language would be very easy," and character even of the speech of the Martian's could be outlined. A study of the *Handbook of Indian Languages* recently published by the *Bureau of American Ethnology* would, doubtless, modify some of the author's ideas as to the character of certain languages.
- Virchow (H.)** Stand der Rudolf Virchow-Stiftung für das Jahr 1910. (Z. f. Ethnol., Berlin, 1910, XLII, 982-987.) Through the Virchow Foundation a part of the finds of H. Schmidt at Cucuteni (Rumania) have been made over to the prehistoric section of the Museum für Völkerkunde. From the expedition of Hr Hantzsch some 100 ethnological specimens from Baffin Land have been received and loaned to the Museum. Grants have been made to Hr Lehmann-Haupt for aid in publishing his work on ancient and modern Armenia; Dr S. Sergi for his monograph on Abyssinian skulls; Hr M. Mayer for a work on South Italian Antiquities; Dr E. Cartailhac for the exploration of the Velede cave near Nuttlar, Westphalia; Dr T. Kluge for investigation of the Lazic and Suanic languages of Caucasia; Hr Kohl of Worms for further excavations of neolithic sites in the Palatine; Dr Neuhauss for the publication of his work on New Guinea; and Dr R. Schmidt for travels in Europe and N. Africa to study the paleolithic age in those regions.
- Wead (C. K.)** Music and science. (Bull. Philos. Soc. Wash., 1910, xv, 169-187.) Treats of primitive, ancient Greek, and modern music. Four stages in the development of musical scales are recognized: Primitive (no more indication of scale than in sounds of birds, animals or nature); stage of implements mechanically capable of furnishing a scale; stage of theoretical melodic scales (Greek, Arab, Chinese, Hindu, Medieval, etc.); stage of the modern harmonic scale and its descendant, the equally-tempered scale. Though overlapping, even in the same locality, these four stages "correspond, in a rough way, to the recognized four culture-stages, namely: the savage, barbarous, civilized, and enlightened."
- Weatherly (U. G.)** A world-wide color-line. (Pop. Sci. Mo., Lancaster, Pa., 1911, LXXIX, 474-485.) According to Prof. W., "the color line is evidence of an attempt, based on instinctive choice, to preserve those distinctive values which a racial group has come to regard as of the highest moment to itself," and "the fact that it is always the lighter race that puts the taboo on the colored, and that the latter is everywhere eager to mix with the whites, is only an evidence of the general trend of choice towards the higher efficiency of the white race." The color problem is not peculiar to America,— "racial characteristics are the accompaniments rather than the cause of lack of adjustment." The negro is "pliable and imitative" and "tends to take on the psychic tone of the dominant culture." Color prejudice, in the last analysis, "is based on cultural difference more than on the degree of pigmentation." The worst aspects of race animosity are eliminated by "narrowing the gap between the actual cultural status of the races."
- Webster (H.)** Rest days: a sociological study. (Univ. Stud., Lincoln, Neb., 1911, XI, 1-158.) Treats, with abundant references to the literature of the subject: Periods of abstinence at critical epochs (Hawaiian *tabu* days, Dayak *lali* days, Assamese *genna* days); periods of abstinence after a death and on related occasions; periods of abstinence at sacred times and seasons (holy-days and quasi-

holidays in higher and lower culture); periods of abstinence connected with lunar phenomena (lunar superstitions and taboos, lunar months and weeks, the hebdomadal cycle); the Babylonian "evil days" and Sabattu (the "evil days, the cult of seven, and the planetary week, Babylonian lunar weeks, taboos observed on the "evil days," the Sabattu); the Hebrew Sabbath (the Sabbath in the Old Testament, the Sabbath as a lunar festival, taboos observed on the Sabbath); periods of abstinence at unlucky times and seasons (conception of un-luckiness, unlucky days in lower and higher culture). Belief in days lucky and unlucky "has operated, like other superstitions to retard the development of mankind," but, "nothing is more interesting than the contemplation of that unconscious though beneficent process which has converted institutions based partly or wholly on a belief in the imaginary and the supernatural into institutions resting on the rock of reason and subserving human welfare." Tabooed and unlucky days originate often in gross superstition, but "sooner or later, they acquire a social significance and may then be perpetuated as the primitive holidays long after their earlier meaning has faded away." The author is of opinion that "the passage of the holy day into the holiday, beginning in the lower culture, promises to reach its culmination in the thorough secularizing of all the great festivals of the Christian year." Prof W. intends shortly to issue this interesting and valuable monograph in amplified form.

Weinreich (O.) Engastirmythen. (Arch. f. Religsw., Lpzg., 1910, XIII, 622-623.) Notes on ventriloquism myths, with reference to Rabelais and his authority for certain statements, C. Rhodiginus in his *Lect. Antiq.* (1517).

— Das Mirakel vom zerbrochenen und wieder geheilten Gefäss. (Hess. Bl. f. Volksk., Lpzg., 1911, x, 65-87.) Well-documented study of the wonder-tale of the broken and restored vessel. The Greek legend of the fourth century B. C., the

various Christian legends (oldest in Gregory of Tours; Gregory the Great; St. Benedict; in iconography, —S. Aretino, J. Mostaert, etc.; St. Nonnosus; Bishop Marcellinus; St. Brigitta; St. Fridolin; St. Odilo of Cluny; Pope Leo IX; St. Guido; C. v. Heisterbach; St. Petrocus; told of St. John the evangelist, by Jacobus de Voragine, etc.; St. Peter of Trevi; St. Anthony of Padua; the devil as breaker; St. Coleta; St. Aldhelm; childhood of Jesus), and cognate tales (legend of Dasûki, a companion of Mohammed, etc.). A Persian proverb relates to a broken glass put together again. Here belongs also, perhaps, Goethe's little poem, *Wunderglaube*.

Westermarck (E.) Totemism and exogamy. (Folk-Lore, Lond., 1911, XXII, 81-91.) Critique of Frazer and reply to latter's criticism of W.'s theory. It is a merit of F., according to W., that he separates totemism and exogamy. W. holds to the theory of "a primeval instinctive sentiment," to be explained by natural selection, as against F.'s view. See Lang (A.), van Gennep (A.).

Weston (J. L.) Alfred Nutt: an appreciation. (Ibid., 1910, XXI, 512-514.) Brief account of Mr Nutt's folk-lore activities and publications. He advocated the insular, Celtic, and popular *provenance* of the Arthurian cycle.

Weule (K.) Die praktischen Aufgabe der Völkermuseen auf Grund Leipziger Erfahrungen. (Korr.-Bl. d. D. Ges. f. Anthrop., Hamburg, 1910, XLI, 74-78.) Gives account of the experience of the Leipzig Ethnological Museum, as to reaching the children (the rule that winning the children takes care of the adults holds here), lecture-courses, use of lantern-slides, congresses and meetings, etc. The satisfaction of the human desire for knowledge and the scientific demonstration of the development of human culture are the two sides of the activities of ethnological museums. This subject is treated by the author more in detail in his address on "Die nächsten Aufgaben und Ziele des Leipziger Völkermuseums" in *Jahrb. d. Städt. Mus. f. Völkerk. in Leipzig*, 1910, III.

EUROPE

- Abt (A.)** Bleitafeln aus Münchener Sammlungen. (Arch. f. Religsw., Lpzg., 1911, XIV, 143-158, 1 fg.) Treats of 5 lead tablets with Greek inscriptions now in Munich collections (Antiquarium, Sieveking, etc.), with discussion of language, etc.
- Andree (R.)** Katholische Überlebsel beim evangelischen Volke. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 113-125.) Treats of remains of Catholic beliefs, etc., among the German Protestants: Attribution of secret powers to Catholic priests and application to them in dire need, e. g. at Hildesheim; use of "holy water," e. g. in parts of Oldenburg; belief in efficacy of water from holy wells, and pilgrimages to these and other holy places, ruins of chapels, etc.; votive offerings of various sorts, sometimes for the release of "the poor souls" (e. g. among the Masures); thank-offerings of sailors (on the Schleswig Halligs, etc.); use of sign of the cross (Masures); retention of fasts and Catholic holy and feast days; adoration of saints (relics even in children's games and songs); worship of relics (feeble traces only), etc.
- Andreucci (A.)** Crani umani presunti quaternari di Sangimignano (Prov. di Siena), ivi conservati nella Biblioteca Comunale. (Arch. p. l'Antrop., Firenze, 1910, XL, 461-468, 3 fgs.) Brief account with measurements of 3 fragmentary crania supposedly quaternary,—possibly higher quaternary (but satisfactory proofs are lacking), from "La Rotta," near San Donato, now in the Public Library of Sangimignano.
- Angelotti (G.)** Intorno a due tipi cranici del territorio etrusco. (Atti d. Soc. Rom. di Antrop., Roma, 1910, xv, 285-307, 2 fgs.) Gives results of observation and measurements of two skulls (male,—capacity 1,581 c.c., ceph. ind., 88.7; male,—cap. calc. 1,503 c.c., index 78.4) and the skeleton belonging to the second. These specimens, now in the Museum of Anthropology, were found in two tombs in the neighborhood of Città delle Pieve, near Chiusi, in the Etruscan territory and belonging to the Etruscan period. Dr A. does not believe in the theory of a specific Etruscan cranial type (better Etruscanized, if any), the Etruscan type being, in the last analysis, Mediterranean. The Etruscan population besides the dolicho-mesocephalic type, possessed also elements of the brachycephalic type (few of these have been found). The Etruscan people were composed of the same elements that inhabited Italy at the close of the eneolithic period. The height of the man represented by the skeleton was (average of several calculations) 1,653 mm. Dr A. thinks that the Etruscans were of medium stature, oscillating between 1,620 and 1,670 or 1,680 mm.
- Ashby (T.)** Lampedusa, Lampione and Linosa. (Ann. Arch. and Anthrop., Liverpool, 1911, IV, 11-34, 3 pls., 4 fgs.) Gives account of visit in 1909 to islands of Lampedusa, Lampione, and Linosa, with historical notes, descriptions of observations, etc. On Lampedusa evidences (stone walls, huts and hut circles, mounds, pottery, etc.) of prehistoric inhabitants, Punic tombs and pottery, buildings of Roman period, Greek and Roman coins, rock-cisterns, etc., were found. Neither Lampione nor Limosa seems to have been inhabited in prehistoric times.
- Bächtold (H.)** Sagen vom Untersee und aus dem Hegau. (Schw. Arch. f. Volksk., Basel, 1910, XIV, 177-190.) Cites 17 brief legends concerning knights, treasures, stones, houses, spirits of men and animals, etc.
- Zur Sage von der Bereicherung durch den Untergang von Plurs. (Ibid., 1911, xv, 243-244.) Notes the origin of the proverb: "Du (Basel) hättest wenig Segen, Wenn Plurs nicht war erlegen." On the destruction of Plurs in 1618 by a landslide of Mt. Konto, its great silk-industry came to Basel.
- Ein Diebseggen und zwei Rezepte. (Ibid., 188-189.) Cites from Fulda Ms. of the 15th century, a charm against theft and two items of folk-medicine.
- Die falsche Braut. (Korrbl. d. Schw. Ges. f. Volksk., Basel, 1911, I, 3-4.) Cites the custom of bringing to the bridegroom first a mere girl, or an old woman, instead of the real

- bride,—the “false bride,”—before the church-procession starts, as a relic of ancient belief in demons, etc.
- Baglioni (S.)** Contributo alla conoscenza della musica naturale. Strumenti musicali Sardi. (Riv. di Antrop., Roma, 1911, XVI, 75–84, 2 fgs.) Gives results of acoustic investigations of Sardinian musical instruments (3 *launeddas*, a special variety of wind instrument). Similar conclusions are reached to those given in B.’s article on primitive music (q. v.).
- Baldasseroni (—)** Il Museo di Etnografia Italiana e la esposizione di 1911 in Roma. (Arch. p. l’Antrop., Firenze, 1910, XL, 457–460.) Notes on ethnological collections of the Italian Ethnological Museum,—the Loria Caltagirone collection, amulets, dress and ornaments, signs and advertisements, habitations and dwellings, folk-literature, library, etc.
- Beck (P.)** Der Teufel im Glase. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 278–279.) Discusses the legend of “the devil in the glass,” a monkish story coming from Kaisersheim—ultimately of Oriental origin.
- Bellucci (G.)** La placenta nelle tradizioni italiane e nell’etnografia. (Arch. p. Antrop., Firenze, 1910, XL, 316–352.) Discusses the placenta in Italian folk-lore, etc.—treatment of the human placenta, the placenta of domestic animals, custom of causing women and female domestic animals to swallow with their food a fragment of their own placenta, practices in use to cause the woman to get rid of the *secondina*, treatment of the placenta among savage and barbarous peoples, medicinal use of the placenta outside of Italy, magic and animistic ideas concerning the placenta, etc. The finding of the remains of a human placenta in a spring in the commune of Magione (Umbria) in 1907, led to the discovery that the women of that region believed that placentas must be thrown into springs or running water, it being believed that the slow maceration of the placenta was necessary for the descent of the milk in the breasts of a woman with child, and the preservation of a large quantity of milk. If the placenta were to suddenly dry up, the glands would also become dry, and suckling be made impossible.
- Bermbach (P.)** “Schutz dem Volkstum in den deutschen Alpen!” (Korr.-Bl. d. D. Ges. f. Anthrop., Hamburg, 1910, XLI, 71–72.) Gives briefly results of a *questionnaire* on the preservation of folk-life, etc., in the German Alps. It appears that the various societies for folk-lore, the preservation of the home, folk-costume, etc., are not sufficient to achieve the end in view but the movement needs to be strengthened by the consolidation and cooperation of them all.
- Biermann (C.)** Le Jorat. Esquisse géographique. (Bull. Soc. Neuchât. de Géogr., Neuchâtel, 1910, XX, 5–116, 20 pls., 7 fgs.) This geographical sketch of the forest-region of Jorat contains notes on the inhabitants (pp. 64–84), their occupations, food, houses, domestic life, etc. The patois is still in use by old people. The name *Jorat* is applied to a portion of the Vaudois tertiary plateau N. and E. of Lausanne. The word is cognate with *Jura*, both terms signifying, probably, “forest.”
- Boll (F.)** Todsünden. (Arch. f. Religsw., Lpzg., 1910, XIII, 632–634.) Compares the list of the crimes of the Boeotian cities with the “seven deadly sins.” The list dates from ca. 260–274 B. C.
- Marica. (Ibid., 567–577.) Treats of *Marica*, identified with Diana, the cult-deity of Kyme, the oldest Greek settlement on Italian soil. Based on a scholion in a Ms. of Augustine’s *Civitas Dei*, dating from the Carolingian period.
- Bolte (J.)** Jacob Grimm an Emmanuel Cosquin. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 249–251.) Gives text of a letter of Jacob Grimm to E. Cosquin, the French folklorist, in 1862. It was Cosquin who sent Grimm the Lorraine version of *Pou et puce*.
- Amulette und Gebete aus Salzburg. (Ibid., 287–289, 1 fg.) Cites from G. G. Göcking’s *Volkommene Emigrations-Geschichte* (Frankfurt, 1734–37) items of folk-lore from Salzburg concerning amulets and prayers.
- Gereimte Märchen und Schwänke

- aus dem 16. Jahrhundert. (Ibid., 160-173.) Gives texts, with bibliographical and explanatory notes of 16th century rhymed tales and jests by Hans Sachs, Peter Heilberger, Eucharius Eyring, Guillaume Haudent, Lorenz Wessel, Adam Meyer, etc. A favorite topic is the enmity of dogs, cats, and mice.
- Bonner** (R. J.) Administration of justice in the age of Homer. (Class. Philol., Chicago, 1911, VI, 12-36.) Treats of self-help (unrestricted); murder (concern alone of relatives and partisan; homicide among relatives commonly settled by banishment; taking of blood-money comparatively rare), adultery, seduction, rape; robbery (cattle-lifting and piracy extremely common); amicable settlement of disputes by arbitrators (often after challenge and wager); meetings of the people for judicial purposes.
- Boule** (M.) *et* **Anthony** (R.) L'encéphale de l'homme fossile de la Chapelle-aux-Saints. (L'Anthropologie, Paris, 1911, XXII, 129-196, 26 fgs.) Detailed study of the encephalon (after a good cast of the endocranium) of the "fossil man" of La Chapelle-aux-Saints, compared with the anthropoids and other primitive men. The general conclusion reached is that "the encephalon of the fossil man of La Chapelle-aux-Saints presents an ensemble of characters of inferiority more numerous and more marked than the encephalon of any existing men," and "if, by reason of volume (absolute and relative) it is human, it seems to approach the anthropoid encephalon in the majority of its morphological details." The man of La Chapelle-aux-Saints possessed probably a rudimentary articulate language, and was likewise already right-handed.
- Bourlon** (Lt.) Essai de classification des burins. Leurs modes d'avivage. (Rev. Anthropol., Paris, 1911, XXI, 267-278, 5 fgs.) Treats of the classification (two chief types, those with rectilinear and those with polygonal *biseau*, with several sub-varieties under each) of gravers (*burins*), and of the methods of sharpening them.
- Brandenburg** (E.) Über Höhlenwohnungen. (Ztschr. f. Ethnol., Berlin, 1911, XLIII, 115-117.) Résumés investigations of the cave-dwellings in southern Etruria in 1909 and in southern Tripoli in the spring of 1910. Details of these Italian cave-dwellings were published in the *Revue d. Et. Ethn. et Sociol.* (Paris) for 1909. See *American Anthropologist*, N. S. XII, 1910, 630.
- Brandes** (G.) Jeanne d'Arc in Dichtung und Geschichte. (Neue Jahrb. f. d. Klass. Alt., Lpzg., 1911, XXVII-XXVIII, 186-207.) Treats of Joan of Arc in history and poetry: V. Varanne's *Digestis Joanne virginis* (1516), Shakespeare, Chaplain's *La Pucelle* (1656), Voltaire, Schiller, etc.; Anatole France, Michelet, Andrew Lang, etc.
- Brandstetter** (R.) *u.* **Hoffmann-Krayer** (E.) Cysatiana. (Schw. Arch. f. Volksk., Basel, 1911, XIV, 198-245, 272-287.) Gives items of all sorts of folk-lore from the Canton of Lucerne toward the end of the 16th century,—reproduced from R. Brandstetter's work on *Renward Cysat (1545-1614), der Begründer der schweizerischen Volkskunde* (Luzern, 1909). Pages 272-287 contain observations on folk customs and usages, dress, folk-poetry, names of plants, animals, etc.
- Breuil** (H.) Études de morphologie paléolithique. II. L'industrie de la grotte de Châtelperron (Allier) et d'autres gisements similaires. (Rev. Anthropol., Paris, 1911, XXI, 29-40, 66-76, 20 fgs.) Treats of the morphology of the stone implements, etc., of the caves of Châtelperron, in the department of Allier; Germolles, in Saône-et-Loire; La Roche au Loup, in Yonne; Haurets, in Gironde; Gargas, etc.,—also some bone objects. These "stations" are all characteristically Aurignacian and derived probably from the stations of the Audi shelter type.
- Briguel** (P.) Les noyaux perforés du Mas d'Azil. (L'Anthropologie, Paris, 1911, XXII, 371-373.) Argues that the perforated fruit-stones discovered by Piette at Mas d'Azil were cut intentionally by prehistoric man for use as whistles.
- Brownlee** (J.) A note on the possibility of analysing race-mixtures into their original elements by the Mendelian formula. (J. R. Anthropol. Inst.,

Lond., 1911, XL, 179-199.) Treats of the Mendelian distribution of jet black hair, the distribution of color of hair and eyes in various parts of Scotland, in connection with other anthropological characters. Pages 196-199 are devoted to a table giving "the probable percentage composition (Teutonic, Alpine, Mediterranean) of the population of the different districts in Scotland based on the observations of Dr. Beddoe." The highest Teutonic percentage (53.6) is found among the farmers of Midlothian, the lowest (29.8) in Arrochar, Tarbet, etc., in the West Highlands. The highest Alpine (49.4) occurs in the city of Brechin, in the Eastern Lowlands; the lowest (26.5) in the Portree district of Skye. The highest percentage of the Mediterranean race is found in Portree, Skye; the lowest in the Dunse district of the Merse,—the differences range from 15 to 30 % in the inland highland valleys. According to B., "nowhere is there any indication that any large tract of country is fundamentally different from the average of the country as a whole," and "early environment tells more than lineage in determining the mental aspect towards the universe,"—the psychical differences of highlander and lowlander are more due to environment than to race.

Brückner (A.) Neuere Arbeiten zur slawischen Volkskunde. I. Böhmisches und Polnisch. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 198-208.) Résumés and critiques of recent literature of Bohemian and Polish folklore. Works of Zíbrt, Polívka, Flajšhans, Holas, Pekar, Slavik, Teige, Patera and Podlaha, Novák, Truhlář, Nejedlý, Pilsudski, Talko-Hryniewicz, Krzek, Gustawicz, Schneider, Fiseher, Chybiński, Hostinský, Gloger, Majkowski, Badecki, Franko, etc.

Burckhardt (F.) Handwerksbräuche der Loh- und Rotgerber in Zürich. (Schwz. Arch. f. Volksk., Basel, 1911, xv, 83-88.) Gives from Ms. of ca. 1848 the customs (reception of traveling members, beer and wine-drinking, questioning of guests, etc.) of the Zürich tanners.

Burr (M.) The medieval literature of the Serbs. (Oxf. & Cambr. Rev.,

Lond., 1911, no. 13, 115-131.) Treats of the popular sagas, "the wonderful national *pjesme*," the cycle of Marko Kraljević, Milosh Obilich, etc. Also the literature, Serbian in tongue, but Italian in form, produced by the aristocratic Republic of Ragusa in the 16th, 17th, and early part of the 18th centuries.

Busken Huet (G.) Een Amsterdamsche sage. (Volkskunde, Gent, 1911, XXII, 31-32.) Gives text of brief Amsterdam tale of the "House with the beads."

Busse (H.) Neue und ältere Ausgrabungen von vorgeschichtlichen Einzel-funden, Gräberfeldern und Wohnplätzen bei Woltersdorf, Kreis Niederbarnim. (Z. f. Ethnol., Berlin, 1911, XLII, 436-501, 32 fgs.) Gives results of older and recent excavations of the prehistoric burial and dwelling places at Woltersdorf. Individual finds (stone axes, flint artefacts, etc.), burial-places (Stolp, Roman Imperial period; Rödenberg; Sprutberg; near Klein-Schönebeck) and finds therein. On pages 451-487 a list of 96 graves is given with brief account of contents, etc.; and on pages 485-497 the various vessels and their ornamentation are discussed. Of the graves 66 contained but one burial, 22 had 2, 6 had 3, and 2 had 4 (in each case 2 children). The cremation-material represented 101 adults, 18 young persons, and 17 children. The number of vessels in each grave varied from 1 to 33 (18 had 5),—there were 569 vessels in all, urns, pots, cups, dishes, jugs, etc. The metal grave-gifts were of bronze (chiefly rings). The grave-cultus represents the mixed northern-Germanic and southern-Thracian, and most of the graves belong to the fourth bronze-period or 1200-1000 B. C.

— Ein Rad aus Ton. (Ibid., 1910, XLII, 971-972.) Note on a small clay wheel (four-spoked) found during the work on the great Reiherwerder in the Tegel Lake, district of Niederbarnim. Such wheels are either children's toys or possibly imitations of wheels of bronze, and connected with some wheel or sun cult.

— Eine Urne mit 14 Buckeln. (Ibid., 972-973.) Brief account of

an urn with 14 bosses (a unique vessel) discovered in an incineration-grave at Gosen (Beeskow-Storkow district) near Lake Seddin, in March, 1910,—the grave dates from about the close of the earlier bronze age.

Buxton (B. H.) A corner of old Württemberg. (Nat. Geogr. Mag., Wash., 1911, XXII, 931-947, 17 fgs., map.) Treats of geographical divisions, family and village names (resemblance to those in Saxon England), types of ancient villages, construction of houses, religious segregation in the towns (small towns and villages 95-99 % Catholic or Protestant), medieval architecture, race, costumes of the people (local costumes rapidly disappearing), etc. The illustrations relate to houses. Notes on "ingen" and "heim," and the marked similarity between the names of villages in Württemberg and in England.

Calderini (A.) Commenti intorno agli eroi di Omero negli scrittori greci fino a Platone. (Rend. R. Ist. Lomb., Milano, 1911, N. S. XLIV, 357-378.) Notes on the heroes of Homer in Greek writers up to Plato.

Capitan (L.) et **Peyrony** (—.) Un nouveau squelette humain fossile. (Rev. Anthropol., Paris, 1911, XXI, 148-150, 2 fgs.) Notes on the discovery of another human skeleton in September 1910 at la Ferrassie in Dordogne, that of a very small woman (stature *ca.* 1480 mm.). The authors are of opinion that these "Monsterians" were considerably below the modern Australians in matter of evolution.

Carus (P.) The Russian fish-epic (Open Court, Chicago, 1911, XXV, 245-248.) Gives several versions of the tale of the smartness of the perch, a favorite topic,—the fish occupies a more prominent place in Russian folk-lore than in that of any other country."

— The Catacombs. (Ibid., 471-500, 48 fgs.) Treats of structure of graves, crypts, etc., art (sculptures of Bible scenes, miracles and scenes in the life of Jesus, figures on tombs, figures from heathen sources), symbols (the Christogram, the swastika cross, the ship, bread, or seven baskets of bread, the anchor, the dove with

an olive branch, and, particularly, the fish), epitaphs and other inscriptions.

Chérié-Lignière (M.) Di un caso di pigmeismo in una donna dell' Appennino Parmense. Studio del cranio e dell'encefalo. (Riv. di Antrop., Roma, 1911, XVI, 3-39.) Detailed study of the skull and brain of a woman of 71 years, native of the commune of Varsi in the Parmese Appennines (46 km. from Parma), who died in 1906 in the City Hospital of Parma. She was 1,320 mm. in height, —cranial capacity 671 ccm., ceph. index 94.69. All the organs examined seemed correspondingly reduced, and no genuine malformations were noted. The brain-weight was 598 gr. No characteristic *microcephalic* features were observed. The case seems to be one of small stature and small cranial capacity occurring with normal intellectual development and to "prove the existence of individual pigmies in this region."

Conil (P. A.) Contribution à l'étude du passage du moustérien à l'aurignacien en Gironde. Station de la Verrière. (Revue Anthropol., Paris, 1911, XXI, 182-188, 2 fgs.) According to C., the stone implements, etc. (three kinds of flint used; arrow-heads; "coups de poing" rare; scrapers and scratchers, blades; nuclei rare; strikers, etc.) indicate a transition stage from the Mousterian to the Aurignacian at the "station" of la Verrière in Gironde.

Cornette (A. H.) De engelsche morris-dansen. (Volkskunde, Gent, 1911, XXII, 173-182.) General discussion of the English morris-dances, with special reference to C. J. Sharp and H. C. Macilwaine's *The Morris-book* (Lond., 1907) and F. Douce's article on "The Ancient English Morris Dance," in *The Mask*, 1910, III.

Coutil (L.) Cachette de fondeur découverte aux Sablons, près Compiègne, Oise. (L'Anthropologie, Paris, 1911, XXII, 373.) Note on a founder's *cache* (hatchets, lance, fragment of sword-blade, bronze block, débris, etc.) of the bronze age.

Cumont (F.) The transformation of Roman paganism. (Open Court, Chicago, 1911, XXV, 129-130.) Discusses Oriental religious influence on the transformation of Latin pagan-

ism (Asia Minor cults, Phrygian cult of the Great Mother, Egyptian Isis and Serapis, Syrian Baal and Chaldean astrology, Persian Mithraism, neo-Platonism, etc.) and sketches the theology of paganism after three centuries of Oriental influence,—“from coarse fetishism and savage superstitions the learned priests of the Asiatic cults had gradually produced a complete system of metaphysics and eschatology.” This paved the way for a universal church.

Curti (N.) Die Butterlampe. (Schw. Arch. f. Volksk., Basel, 1911, xv, 224-233.) Treats of the “butter-lamp” and butter-tax for churches, particularly in the 17th and 18th centuries. Data are cited (pp. 231-233) from the reports of episcopal visitations in 1643 for various parts of Switzerland.

Czekanowski (J.) Beiträge zur Anthropologie der Polen. (Archiv f. Anthrop., Brnswchw., 1911, N. F., x, 187-195, 2 maps.) Discusses the stature of the inhabitants of Poland as revealed by the measurements of recruits 1874-1889, 1890-1898 (Czekanowski) and 1874-1883 (Zakrewski); also cephalic indices. The population of the Slavonic areas, according to C., is a sub-brachycephalic, small-statured, dark-blond pre-Slavonic type, which has been overrun by a series of anthropological strata as follows: (1) a blond, tall, short-headed (Sarmatian) type in the region from the Carpathians to beyond the Volga; (2) the Nordic type, which has wedged itself along the Vistula and Dwina far into the interior; (3) the very brachycephalic Dinaric type visible in Kiev and East Galicia, which has increased the brachycephaly and likewise the pigmentation. In West Galicia appears another very brachycephalic element, possibly *H. alpinus*.

Dawkins (W. B.) The arrival of man in Britain in the Pleistocene age. (J. R. Anthr. Inst., Lond., 1910, xl, 233-263, 5 fgs.) Treats of divisions of Tertiary period; evidence (none) of man in Eocene, Miocene, and Pliocene periods; value of evidence of “eoliths” (doubtful); the precursor of man in Java in the Pleistocene age (“marks first great departure of man from the higher anthropoid apes, not only in

brain, but in hand”); arrival of paleolithic man in Europe and classification of his implements; early Pleistocene mammalia in Britain; mid-Pleistocene mammalia; late-Pleistocene mammalia; late Pleistocene mammalia associated with man in river-deposits and caves, and with man in Britain; the migration of Pleistocene mammalia into Europe (pp. 249-256); place of the river-drift man in these migrations (belongs to southern group of mammalia); cave-man (belongs to northern group); relation of cave-man to Eskimo (the latter the representative and possibly the successor of the former, as their culture suggests); changes at the close of the Pleistocene period (“there is ample time in the vastness of the interval between the Pleistocene and prehistoric periods for the appearance and disappearance of many successive races of mankind”).

De Cock (A.) Spreekwoorden, zegswijzen en uitdrukkingen op volksgeleef berustend. (Volkskunde, Gent, 1911, xxii, 33-37, 58-65, 93-100, 151-163, 190-193.) Continuation of proverbs and phrases resting upon folk belief. Nos. 102-120 relate to animals, Nos. 121-132 to birds.

— Geparodieërde sermoenen. (Ibid., 80-82.) Give a parodied sermon (in part) entitled “Sermon of Pater Brom,” and another “The Preaching of Domine Stokvisch.”

— De macht der kinderlijke onschuld in de sagenwereld. (Ibid., 163-168.) First section, giving 3 Flemish and 4 French folk-tales illustrating the power of the child's innocence.

De K. (E.) Een wandeling naar de Katreveeren. (Ibid., 66-70.) Treats of the place-name *Katreveere(n)* and folk-lore relating thereto,—it is the name of a place and an inn near O. L. Vrouw-Waver.

— Een volksgebruik te Leuven en te Rome. (Ibid., 79-80.) Notes on the so-called “pot-market” in front of the church of St. Anthony, during the feast of St. Apollonius at Louvain, and a corresponding practice at the church of St. Agnes in Rome.

Delambre de Monchaux (M.) Notes sur les vieilles lampes à huile dont l'usage disparaît dans le midi de la

- France. (Rev. d'Ethnogr. et de Sociol., Paris, 1911, II, 158-159, 3 fgs.) Brief account of three varieties of oil-lamps formerly in use in Languedoc,—they are now rapidly disappearing, having been driven out by modern appliances.
- De Puydt (M.)** Communication sur le préhistorique liégeois. (Korr.-Bl. d. D. Ges. f. Anthr., Hamburg, 1911, XLII, 7-12.) Résumés the discoveries of a prehistoric nature in the Liège region (dwelling-sites of Hesbay, lithic and ceramic finds; pre-Tardenian finds at Zonhoven, etc.).
- Detting (A.)** Aus dem Arzneibuch des Landammans Michael Schorno von Schwz, + 1671. (Schwz. Arch. f. Volksk., Basel, 1911, XV, 89-94, 177-184.) Cites 60 items of folk-medicine, charms, etc., from the collection (made 1629-1670) by M. Schorno (1598-1671) of Schwz,—the original Ms. is in the Cantonal Archives.
- Deubner (L.)** Zur Entwicklungsgeschichte der altrömischen Religion. (Neue Jahrb., f. d. Klass. Alt., Lpzg., 1911, XXVII-XXVIII, 321-335.) Discusses the development of ancient Roman religion, with special reference to G. Wissowa's *Religion und Kultus der Römer* (München, 1902), etc. The rites are more important than the names of the festivals (briefly considered). In some cases deities have grown up out of rites. The development of *Jupiter Lapis* is of great interest. Also the Luperca.
- Luperalia. (Arch. f. Religsw., Lpzg., 1910, XIII, 481-508.) Treats in detail of the Roman festival of the *Luperalia*. The etymology of *luperci* (whence *lupercal* and *luperalia*) is discussed, and the derivation from *lupus* and *arceo* adopted,—“wolf-warder,” “protector against wolves,” as would be natural in a festival of shepherds; the character of the festival considered with the actions of the participants (the relation to women, etc.),—from a pastoral festival the old rite changed to a penitential ceremony; the bloody ritual is of later origin (cf. Greek catharsis) and came comparatively late as an addition to the ancient Roman ceremony. The story of the *Luperalia*, from the simple festival of shepherds to its last appearance among the Romans is a most interesting one.
- Distel (T.)** Ein Basler Bänkelsängergelied vom Jahre 1566. (Schwz. Arch. f. Volksk., Basel, 1911, XV, 107-111, 1 fg.) Text of a Basel ballad of the year 1556 from a printed copy in the Dresden city library. The song deals with a murder committed in 1565.
- Dörler (A.)** Sprichwörter und Redensarten aus Vorarlberg. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 259-273.) Dialect texts, with literary German versions where necessary, of 447 proverbs and sayings from Vorarlberg.
- Dorling (E. E.)** The queen's arms. (Oxf. & Cambr. Rev., Lond., 1911, No. 14, 48-54.) Treats of the origin and development of the arms of the English queen,—“a marshalling by impalement of the arms of the king with those of his consort, in accordance with the practice which has prevailed in English armory since the days of King Edward III.”
- Drouet (Dr.)** Le loup-garou en Limousin. (Rev. d'Ethnogr. et de Sociol., Paris, 1911, II, 146-157.) Treats of the *loup-garou* or werewolf in modern Limousan folk-lore,—he “is not an avatar of the devil,” but beliefs in the werewolf here as elsewhere in Europe, are “fragments of the magico-religious fear felt by prehistoric peoples for the wolf,” a feeling to which is due the lycolatry of ancient Greece, Italy, Gaul, etc.
- Dubois (A.)** L'Areuse ou La Reuse. Recherches sur l'orthographe de ce nom. (Bull. Soc. Neuchât de Géogr., Neuchâtel, 1910, XX, 157-193.) Interesting historico-etymological study of this place-name, the correct orthography of which is *l'Areuse*, or *Areuse*, the etymology of which is unknown.
- Duckworth (W. L. H.)** Report on a human skull from Thessaly, now in the Cambridge University Anatomical Museum. (Man, Lond., 1911, XI, 49-50, 2 fgs.) Describes briefly, with measurements, a mesaticephalic (ind. 76.9) skull from Tsangli, dating probably from the end of the second neolithic period, comparable, perhaps, with some of the Roussolakkos crania from Crete, now in the Museum at Candia. Thessalian crania of modern

- date from this locality are longer and narrower.
- and **Shore** (L. R.) Report on human crania from peat deposits in England. (*Ibid.*, 134-139, 2 fgs.) Treats, with descriptions and measurements, of 7 male and 1 female skull (several fragmentary), with indexes ranging from 68.5 to 85.5 from Cambridgeshire, Lincolnshire, Lancashire and Norfolk. Great diversity of cranial form is indicated, with unusual form is indicated, with unusual frequency of brachycephalism.
- Dumur** (B.) *Historiettes vaudoises*. (*Korrbl. d. Schw. Ges. f. Volksk.*, Basel, 1911, 1, 33-34.) Three brief tales of the sayings of men at the gallows.
- Durham** (E.) High Albania and its customs in 1908. (*J. R. Anthr. Inst.*, Lond., 1910, XL, 453-472, 1 pl., 1 fg.) Treats of tribal groups, immigration, Bogomilism, marriage and tribal law, status of women, domestic life, amulets, devil-lore, tribal government, etc. Pages 466-471 are occupied by a table of the tribes of North Albania, —Malsia e Madhe (great mountain land), Pulati, etc. The plate accompanying the article reproduces various tattoos common among the Christian tribes.
- Edge-Partington** (J.) A note on certain obsolete utensils in North Wales. (*Man*, Lond., 1911, XI, 50-51, 14 fgs.) Figures, with notes, a ram yoke, turf-spade, "turfing iron," rush-dipping dish of iron, wooden "begging bowl," wooden dish, "porringer," wooden butter-scales, malt-shovels, rolling-pin, oven-shovel or "peel," pipe-rack, miniature beer-barrel,—except a few all are from North Wales.
- Favraud** (A.) *Ateliers préhistoriques d'extraction et de taille du silex à la Petite-Garenne, commune d'Angoulême, Charente*. (*Rev. Anthropol.*, Paris, 1911, XXI, 129-140, 8 fgs.) Treats of an extensive working-site for neolithic implements (the finding of an iron sword and pottery fragments indicates that use continued quite late), probably for purposes of trade and exchange at Petite-Garenne in the department of Charente. Picks and similar implements of antler-horns were also found.
- Fenwick** (W.) Cave-dwelling in England. (*Amer. Antiq.*, Benton Harb., Mich., 1911, XXXIII, 38-39.) Résumés briefly the results of Mr H. E. Balch and Mr R. D. R. Troup's exploration of a late Celtic and Romano-British cave-dwelling at Wookey Hole in Somerset, as given by them in a paper read before the Society of Antiquaries.
- Fischer** (E.) In welcher Form haben die Balkanvölker ihr Getreide verzehrt? (*Korr.-Bl. d. D. Ges. f. Anthr.*, Hamburg, 1911, XLII, 31-32, 1 fg.) Treats of the preparation of grain for food among the Balkan peoples,—cooking of wheat kernels whole (cf. Rumanian *colivă*), hand-mills and their names. The conservatism of the Rumanian people is noted.
- Sind die heutigen Albanesen die Nachkommen der alten Illyrier? (*Z. f. Ethnol.*, Berlin, 1911, XLIII, 564-567, 1 fg.) Cites evidence from language (*Dardani* cf. Albanian *darde*, pear-tree; Dalmati, Antariati, Vardaei; Illyrian royal name *Ballaïos* survives in Servian names of the 15th century), botany, folk-dress, foods and their names, etc., that the modern Albanians are the descendants of the ancient Illyrians.
- Florance** (—). La station préhistorique et les tumulus avec murées de Maves-Pontijou, Loir-et-Cher. (*Rev. Anthropol.*, Paris, 1911, XXI, 345-355.) Treats of the tumuli with walls (of 43 tumuli 13 were thus surrounded), —of which several have been explored at Maves in the department of Cher-et-Loir. This "station" belongs possibly to the bronze age.
- Frassetto** (F.) *Relazione intorno all' "Atlante antropologico dell' Italia." Questioni di metodo e di tecnica*. (*Arch. p. l'Antrop.*, Firenze, 1910, XL, 433-449.) Discusses questions of method and technique in connection with the proposed "Anthropological Atlas of Italy,"—unification of nomenclature, measurements, indices and their categories, technical details, collecting and arrangement of observations, etc. The terminology now in use and that proposed is given on pages 446-447, the *questionnaire* itself on pages 448-449. The same article appears in *Atti d. Soc. Rom. di An-*

- tröp.*, 1911, XVI, 85-101, with an additional *Nota* containing definitions of a number of technical terms, etc. (pp. 102-105).
- Fris (V.)** Een kindergevecht te Brugge in 1489. (Volkskunde, Gent, 1911, XXII, 53-58.) Treats of the fight in 1489 in the streets of Bruges, between two bands (some 500 or 600) of children from 10 to 14 years of age.
- Gabbud (M.)** Contes et légendes. (Korrbl. d. Schw. Ges. f. Volksk., Basel, 1911, I, 11-12.) Texts of 3 brief tales and legends: Punishment in kind; an enchanted cock; the man, the green lizard, and the serpent.
- Les Diablats à Médières. (Ibid., 23-24.) Version obtained in 1910 from Médières, Bagnes, of the famous legend of the *Diablats*, made classic by Courthion in his *Veillées des Mayens* (1897) and Jegerlehner in his *Sagen aus dem Unterwallis* (1909).
- Légendes valdostaines. (Schw. Arch. f. Volksk., Basel, 1911, XV, 118-119.) Brief legend concerning the statue of St. Christopher in the Aosta country,—the wooden statue shed blood when struck by the axe.
- Remèdes. (Schw. Arch. f. Volksk., Basel, 1911, XV, 238-243.) Cites 46 items of folk-medicine collected from the peasants of Bagnes since 1906.
- Usages, habitudes, croyances superstitieuses et autres traditions diverses recueillis à Lourtier, Vallée de Bagnes. (Ibid., 1910, XIV, 290-295.) Gives 47 items of folk-lore of all sorts concerning ghosts, luck in lotteries, etc., children, love, poisons, number 13 and Friday, animals, birds, bees, etc., women, marriage, weather, snakes, sorcery, wax-images of saints, etc.
- Gailloud (H.)** Légendes du Jura vaudois. (Korrbl. d. Schw. Ges. f. Volksk., Basel, 1911, I, 27-29.) Texts of 6 brief legends of the Waldensian Jura: devotion, death of an "envouté," possession, the bell of the Lac de Joux, the way to tell time, the Saracens.
- Gebhardt (A.)** Ein altisländisches Rechenrätzel. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 177-178.) Suggests that a certain passage in an Icelandic Ms. of the end of the 14th or beginning of the 15th century is cognate with the riddle: "A stone weighs three pounds and half a stone, how much do three such stones weigh?"
- Gerster (L.)** Sprüche und Inschriften auf Bauerngeschirr und Glas. (Schw. Arch. f. Volksk., Basel, 1911, XV, 138-147, 204-213.) Gives numerous verses and inscriptions of various sorts on peasant crockery and glass from Langnau, Simmenthal, Heimberg, Winterthur, Zürich, Aarwang, etc., chiefly of the latter end of the 18th century.
- Gessler (E. A.)** Sprüche auf Glas, Fayence und Steingutwaren im Historischen Museum zu Basel. (Ibid., 100-106.) Cites some 70 inscriptions on glass, faïence and stone-ware in the Basel Historical Museum, dating from the seventeenth to within the nineteenth century. The greater part of these sayings belong to the eighteenth century.
- Giuffrida-Ruggeri (V.)** Per una sistemazione del tipo di Cro-Magnon e una rara anomalia, ossificazione nello spazio suturale coronale. (Arch. p. l'Antrop., Firenze, 1911, XLI, 153-173, 1 fig.) Discusses the character and position of the Cro-Magnon type, with special reference to the Galley-Hill skull, etc.—these two types differ in several respects, particularly with respect to the flattening of the cranial vault. According to G.-R., "the Mediterranean pentagonoids are nearest related to the Cro-Magnon type, confirming the view that the Mediterranean is a more highly evolved Cro-Magnon type." As belonging to the Galley-Hill (so-called Pelasgic) type, G.-R. lists the skull of the Grotta del Tufo (Como), the cranium No. 5 of Remedello, perhaps one of the Este skulls and one of the Picean skulls from the necropolis of Tolentino; the hypercephalic cranium from Conain recently described by Zanolli, some Sardinian skulls described by Sergi, etc. The author likewise describes in cranium No. 648 of the Anthropological Museum (Florence) the very rare anomaly of a sutural bone in the left coronal,—the skull is that of an adult woman with capacity of 1400 c.c.
- Goossenaerts (J.)** Volkswijsheid over het weer. (Volkskunde, Gent, 1911, XXII, 121-130.) Treats weather folk-

- lore,—proverbs, sayings, etc., concerning the coming winter, snow, Christmas, the various months, rain-signs and rain-omens, wind, the moon, "Keeske-Nijsens Zomer," etc.
- Gorra (E.)** *Origini, spiriti e forme della poesia amorosa di Provenza secondo le più recenti indagini.* (Rend. R. Inst. Lomb., Milano, 1911, II s., XLIV, 162-180.) Continuation of review and critique of E. Wechssler's recent work on Provençal love-poetry.
- Graebisch (F.)** *Probe der westglätzischen Mundart von Brzesowie.* (Mitt. d. Schles. Ges. f. Volksk., Breslau, 1910, XII, 223-224.) Dialect text of brief tale of dragons and Free Masons in the Brzesowie dialect (West Glatz) of Silesian German.
- Haas (A.)** *Brumshagensch und Vater Bümke, zwei pommersche Sagenge-stalten.* (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 243-248.) Treats of *Brumshagensch* (9 brief legends are given at pp. 244-246) and "Father Bümke," two Pomeranian legendary figures. The former has a horse's head and appears most commonly on a moor in the Saal forest, and the legend is more than a century old. The identification with a historical personage is a modern invention. "Father Bümke" is likewise "an old worn-down legendary figure." He also is related to the horse. The etymology of both names is rather uncertain.
- Hall (E.)** *The ancient hymn-charms of Ireland.* (Folk-Lore, Lond., 1910, XXI, 417-446.) Treats of the native hymns and eulogies of Irish saints, the charm-hymns (St. Columba's *Altus Prosator*, e. g.), the *loricas* of St. Patrick and others, spells, charms, divinations, etc.
- Harmen (Dr) u. Siebs (T.)** *Ältere Helgolander Gedichte.* (Mitt. d. Schles. Ges. f. Volksk. Breslau, 1910, XII, 161-180.) Gives dialect texts of 9 old Heligoland songs (including lullabies, counting-out rhymes, children's verses) collected by Dr Harmen in 1857-1860, with German renderings.
- Haslinghuis (E.)** *Zur Rumpelmette.* (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 290-291.) Cites from writers of the 16th and 13th centuries (also item from 18th) data concerning noise-making in churches during the last days of holy week, said to be connected with the betrayal of Jesus by Judas, the disturbances of nature occasioned by his death, his passage into hell, etc.
- Hauser (O.)** *Über die Ergebnisse vor-jähriger Ausgrabungen.* (Z. f. Ethnol., Berlin, 1911, XLIII, 307-310.) Notes on excavations of 1910 in the Laugerie region of the Vézère valley, including the new "station" of La Rochette. The finds consist of Solutré material and fragments of a child's skull from Badegoule; part of a male cranium, Le Moustier; several human teeth and some bones from La Rochette. The property of the middle and upper Laugerie has now been acquired and added to the territory of exploration.
- Hellwig (A.)** *Ein moderner Hexenprozess in Posen.* (Mitt. d. Schles. Ges. f. Volksk., Breslau, 1910, XII, 191-215.) Give the text of legal proceedings, etc., in a charge of witchcraft against a woman of Schöndorf in Posen in 1907.
- Helm (K.)** *Johann Ellingers Hexen-Coppel, die "Agnus Dei" und "Bibel-amulette."* (Hess. Bl. f. Volksk., Lpzg., 1911, X, 40-43.) Notes on the *Agnus dei* (consecrated wax-images), biblical amulets, etc., from Ellinger's *Hexen-Coppel* (1629), a copy of which rare work is in the library of the University of Giessen.
- Hempl (G.)** *The solving of an ancient riddle.* (Harper's Mag., N. Y., 1911, CXXII, 187-198, 11 fgs.) Describes the deciphering by the author of the disk found by Dr Pernier two years ago under a part of the palace of Phaestos dating from not later than 1600 B. C. Both faces are covered with "characters differing from those employed in all the other Minoan writings." Dr H. has determined the document to be pre-Homeric Ionic Greek in a syllabic script. The disc itself "originated on the southwest coast lands of Asia Minor." This text, concerned with a religious sacrifice and cast in metrical form, is the oldest written Greek known and valuable for the early history of Greek sounds, inflections and syntax.
- Herman (O.)** *Das Artefakt von Olonec und was dazu gehört.* Mit

Erwiderung von H. Obermaier und Bemerkung von J. Szombathy. (Mitt. d. Anthropol. Ges. in Wien, 1910, XL, 181-190, 2 pls.) II. cites further evidence as to the genuineness of the "stone axe of Olonec" as a paleolithic implement. Hr Obermaier regards it as neolithic.

van Heurck (E.) De vlaamsche kinderprenten. (Volkskunde, Gent, 1911, XXII, 24-31, 70-78, 101-120, 18 fgs.) Based on E. van Heurck and G. J. Boekennoogen's *Histoire de l'imagerie populaire flamande* (Bruxelles, 1910), with reproduction of several pictures, —the seven works of mercy, the history of Eulenspiegel, the wandering Jew, the devil's dance, le bon Guillaume, the land of Coccagne, topsy-turvydom, game of fox and geese, child's play, industries, battle of Austerlitz, etc. The Flemish "folk-art" here represented is of great interest.

Hoefler (M.) Volkskundliches aus dem Isartale. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 256-259.) Items of folk-lore from the Isar valley concerning holidays and saints' days, colors, midwives, women-in-child-bed, baptism, wedding, candlemas customs, carnival, Easter, May-customs, lighting, etc.

Hoffmann (W.) Beiträge zur Volkskunde Rhein Hessens. (Hess. Bl. f. Volksk., Lpzg., 1911, x, 101-124.) Treats of Rhenish Hessian customs and usages relating to the course of the individual life from birth to death (child-birth, baptism, marriage, death and burials); also (pp. 114-124) superstitions and magic (animal-forms, personages, the devil, sorcery, folk-medicine for man and beast, nakedness, magic and counter-magic), etc.

— Beiträge zur Volkskunde Rhein Hessens. (Ibid., 16-39.) Notes on folk-lore in Rhenish Hesse: Wine and the cultivation and use of the grape (wine in ceremony, courtesy, etc., "corpse-wine," drunkenness, fermentation, relation of grape-growing with religion, etc.), customs and usages in connection with the seasons, house-building and acquisition of property, tales and legends (8 brief stories concerning martyrs, old

castles and churches, buried treasure, origin of children, etc.).

Hoffmann-Krayer (E.) Taufzettel. (Schwz. Arch. f. Volksk., Basel, 1911, xv, 112, 1 pl.) Note on baptismal certificate (dating from 1816) given by Swiss god-parents to god-children.

— Bibliographie über die Schweizerische Volkskundeliteratur des Jahres 1910. (Ibid., 123-128.) This bibliography of Swiss folk-lore for 1910 contains the following sections: Bibliographical and general, 12 titles; miscellaneous, 9; economical, 6; house, etc., 9; collections, 2; folk-industry, 3; customs, usages, festivals, 30; beliefs, etc., 12; folk-poetry and legend, etc., 22; folk-speech, 5; music, 1; language, 21. In all, over 130 titles covering a very wide field.

— Ein Badschenkengedicht aus der Wende des 15. Jahrhunderts. (Ibid., 1910, XIV, 247-250.) Gives text of a "bath-gift song" from the Ms. of Joh. Krug, late Archivist of Basel.

— Die Pest. (Korrbl. d. Schw. Ges. f. Volksk., Basel, 1911, 1, 17-21.) Cites folk-lore items concerning the plague. Superstitious formulæ, omens, plant-remedies, recourse to saints, etc., scare-crows, etc.

— Weihnacht und Neujahr im Emmental um 1850. (Ibid., 35-36.) Cites from a letter of J. Gotthelf items concerning Christmas and New Year's day.

Högborn (A. G.) Geografiska skolexkursioner. (Ymer, Sthlm., 1911, XXXI, 47-76.) Treats of geographical school-excursions in Sweden and the movement for the advancement of "culture-geography," etc.

Hörmann (K.) Die rituellen Beigaben in Hügelfräbern Nordbayerns. (Korr.-Bl. d. D. Ges. f. Anthr., Hamburg, 1911, XLII, 34-39, 6 fgs.) Treats of the ritual gifts in the North Bavarian mound-graves (stone period not represented; early bronze age feebly represented; late bronze age; old and later Hallstatt periods; early La Tène period). There is a paucity of such grave-gifts in the bronze age, due, perhaps, to their symbolic use. The abundance of ceramic gifts in the Hallstatt period is not peculiar to this region.

Howarth (W. J.) Comparison between town and country children. (School

- Hygiene, Lond., 1911, VIII, 454-457.) Data from Annual Report to the Kent Education Committee. The figures for heights and weights of children 13 years of age are much the same for town and country,—but “the children of the poorest town schools are inferior to those in the poorest country schools, and the high standard for height and weight found in the best town schools raises the general average to one closely resembling that found in the country schools.” Comparisons of disease, defects are also made.
- Jacoby (A.)** Zu den “Kleinigkeiten” (Bd. XI, 269 ff.). (1) Du bist mein, ich bin dein. (2) Störger. (Schw. Arch. f. Volksk., Basel, 1911, xv, 185-188.) Cites from Speidel's *Speculum* of 1657, example of *Du bist mein, ich bin dein*, as marriage formula. Also discusses the meanings of *Störger* in the 17th century.
- Eine Warnung vor den Künsten der Hexen auf einem Flugblatte vom Jahre 1627. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 293-297.) Cites a warning against the arts of witches from a fly-leaf of 1627, referred to in Speidel's *Speculum jurid.-polit.-hist. observ. et notab.* (1659).
- Janiewitsch (O.)** Volkskundliches aus Russland. (Arch. f. Religsw., Lpzg., 1911, xiv, 315.) Items concerning treatment of corpse, etc.
- Volkskundliches aus der Ukraine. (Ibid., 315-317.) Items from W. Miloradowitsch's *Ukrainisches Geheimwissen und Zauber* (Charkow, 1909),—charm against fire, charms for favorable decision of judge, love-charm, etc.
- Kahle (B.)** Zum Nerthuskult. (Ibid., 310-313.) K. thinks the Nerthus-rites (procession, washing of the chariots, cloths, goddess, etc.) can not be explained as a rain-ceremony.
- Ein altnorwegisches Bärensohn-märchen. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 280-281.) Discusses the “bear's son” tale given in the saga of St. Olaf, a tale not included in Pauzer's *Beowulf*.
- Kaindl (R. F.)** Deutsche Volksbräuche in Galizien. (Ibid., 251-255.) Gives items of folklore (baptism, confirmation, wooing, wedding, death, etc.) from Reichenbach near Lemberg; old account of Swabian folk-customs in Galicia, from S. Bredetzky's *Hist. Stat. Beitrag zum deutschen Kolonialwesen in Europa* (Brünn, 1812); a fire-charm from Wiesenberg; a “letter from Heaven,” from Dornfeld.
- Keiper (P.)** Flandrischer Leichtfuss, Flandrian. (Mitt. d. Schles. Ges. f. Volksk., Breslau, 1910, xii, 159-160.) Discusses the etymology of these terms,—there is a second word *flandrisch* (from *flandern* = *flattern*), that has nothing to do with *Flandern*, the place-name, but signifies “frivolous,” etc.
- Kessler (G.)** Die Sittenmandate im Wiler Stadtarchiv. (Schw. Arch. f. Volksk., Basel, 1911, xv, 43-69.) Cites from the municipal archives of Wil during the period from the sixteenth (the earliest, 1505, concerns religion) to the eighteenth century regulations, etc., relating to religion and morals: processions, Sunday, public prayers, fast-days, profane language, drinking,—brandy is first mentioned in 1620, New Year's celebrations, gaming (many children's games forbidden), noise making, dancing (limited to certain days), tipling in ale-houses, smoking (“Tabaktrinken”), dress and ornament (53-59; many prohibitions), expensive gifts at baptisms and weddings forbidden (“praktizieren” prohibited), carnival and other excesses; regulations concerning property, fruit, etc., the plague, barbers and surgeons, etc.
- Kiekebusch (—)** Der gegenwärtige Stand der Ausgrabung eines bronzezeitlichen Dorfes bei Buch in der Nähe von Berlin. (Z. f. Ethnol., Berlin, 1910, XLII, 974-975.) Notes on present condition of the excavation of the bronze-age village near Buch not far from Berlin. The pottery shows many resemblances with the Lausitz type. The village dates from the early bronze period and must have continued to be inhabited for several centuries. The excavations are not yet half completed.
- Kiessling (F.) u. Obermaier (H.)** Das Plateaulehm-Paläolithikum des nordöstlichen Waldviertels von Niederösterreich. (Mitt. d. Anthr. Ges. in Wien, 1911, xli, 1-32, 7 pls., 5 fgs.) K. treats of the geological, topographical, and other relations of the

paleolithic "stations" of Thürnau, Autendorf, Trabersdorf, Nonndorf (2) and Zissersdorf, all in the neighborhood of Drosendorf in the north-eastern forested region of Lower Austria; and O. describes, with some detail, the flint implements discovered in these "stations." The date of these finds is the later paleolithic period, corresponding to the Aurignacian of France.

King (I.) Some problems in the science of religion. (Harv. Theol. Rev., Cambridge, 1911, IV, 104-118.) Replies to certain criticisms of the author's recent book on *The Development of Religion*. According to Dr K., the rites and ceremonies and other activities of primitive religion ("and to some extent also of the civilized races"), have "a striking similarity to the more general play-customs and economic activities of the society," which suggests that their religious meaning has been acquired, but religious practices are no more an "aside" or "by-product," differentiated from the primary adjustment reactions than is any other aspect of present-day human life; also "the hypothesis of a primitive animism is not the only possible view of primitive man's attitude toward the world." Magic "is essentially individualistic and private," religion has a "social quality." The idea of deities developed from primitive objects of interest related in some quite acute manner to the welfare of the savage (elementary processes of food-supply, protection, reproduction).

Kinnaman (J. O.) Roman archeology. (Amer. Antiq., Benton Harbor, Mich., 1911, XXXIII, 155-159.) Chap. II treating of the prehistoric Campagna, the story of Romulus and Remus, etc.

Klamroth (—.) Afrikanische Brettspiele. (Archiv f. Anthrop., Brn-schw., 1911, N. F. X, 196-202, 14 fgs.) Treats of the *kigogo* game and the *kimasai* among the Bantu negroes of the region of M'paua, etc., especially the Wagogo. On pages 200-201 is given a version of the Wagogo legend of the origin of the game. It may have been originally a "war-game."

Klapper (J.) Vampir, Werwolf, Hexe. (Mitt. d. Schles. Ges. f. Volksk., Breslau, 1910, XII, 180-185.) Gives

data from Mss. of the 16th century concerning beliefs in vampires, wer-wolves, witches, etc.

— Krankheitsübertragung. Rezepte aus altschlesischen Handschriften. (Ibid., 185-191.) Gives some 20 items concerning the cure of diseases, etc., by magical transference, from Silesian Mss. of the 17th century.

— Ein schlesisches Neujahrsliedchen aus dem XV. Jahrhundert. (Ibid., 215-218.) Gives text of a Silesian New Year's song from a Ms. of 1534 in the library of the church of Corpus Christi in Breslau.

Koch (M.) Pathologisch verdickte Schädel. (Z. f. Ethnol., Berlin, 1911, XLIII, 617-620.) Notes on 5 cases of pathologically thickened skulls (the original described by Malpighi in 1697, now belonging to the University of Modena; model of the skull described by Gaddi in 1863; the original of the skull described by Wrany in 1867; a skull in the Prague collection; a partially hyperostotic skull also at Prague). Two other skulls, one with *Leontiasis ossea* and the other with real exostoses, were exhibited.

Kondziella (F.) Die Totenbretter. (Mitt. d. Schles. Ges. f. Volksk., Breslau, 1910, XII, 149-158.) Treats of "death-boards" in Silesia, etc., in addition to the data in the nine extensive works of Hern, Rieder, and Meyer. Great variety of form exists, also of color; the inscriptions are likewise subject to considerable diversity. The "death-boards" are used for placing the corpse on; afterwards they are preserved as heirlooms in the house, placed up against the barn, the hedge, or laid down upon the ground. Sometimes they are burned after the funeral. "Death-boards" with dates as late as 1900 are known. Many superstitions are connected with them.

Kyrle (G.) Über einen prähistorischen Glasfund. (Stzbr. d. Anthr. Ges. in Wien, 1911, 12-13, 1 fg.) Describes, with results of chemical analysis of a piece of glass (found with a fragment of pottery of the La Tène period at Ruprechtling, in the Aschach district, Upper Austria), indicating probably the existence at this place of

the manufacture of glass objects for ornament.

Laing (G. J.) Roman prayer and its relation to ethics. (Class. Philol., Chicago, 1911, VI, 180-196.) Author concludes that "while Roman prayer throughout its whole history retained for the most part a primitive form, yet it did at an early date in certain cults involve moral ideas—not moral merely in the sense in which Jevons uses the term but moral in the ordinary acceptance of the word."

Lalanne (G.) Découverte d'un bas-relief à représentation humaine dans les fouilles de Laussel. (L'Anthropologie, Paris, 1911, XXII, 257-260, 1 fig.) Brief account of the discovery in the lower Solutrean, at the rock-shelter of Laussel in the valley of the Beune (Dordogne), of a rock bas-relief of two human figures (probably *coitus* or birth scene). The author suggests relationship with the female statuettes of Brassempouy, Mentone, Willendorf, etc.

Lambelet (M.) Prières et recettes. (Schw. Arch. f. Volksk., Basel, 1911, XV, 184-185.) Cites 6 items of folk-medicine, recipes against robbers, for regaining things stolen, etc.

Lattes (E. E.) Saggio di un indice fonetico etrusco, T, TH e D. (Rend. R. Ist. Lomb., Milano, 1911, II s., XLIV, 450-460.) Index of Etruscan words containing the sounds *t*, *th*, and *d*.

— Di alcune vere od apparenti somiglianze fra la lingua etrusca e le litoslave. (Ibid., 276-282.) Cites a number of real or apparent resemblances between Etruscan and Letto-Slavonic: *-sa* (of personal names), *-a*, *-e*, *-i*, *-u* of feminine personal names; *-ia* of names of women; *-ca* of women's names; *-cu* feminine suffix,—cf. Russian *-ka*, Lithuanian *-kas*, etc.

Leeds (E. T.) Notes on some examples of late Anglo-Saxon metal work. (Ann. Arch. and Anthropol., Liverpool, 1911, IV, 1-10, 1 pl., 1 fig.) Treats of four silver strap-tabs (now in the Mayer collection in the Public Museum of Liverpool) and their decorative designs (zoomorphic ornament). The basis of the later A.-S. art, as exhibited in metal work, is a "mingling of Karolingian and Irish

design." For the resulting fashion "no exact parallel can be found, either on the Continent or in Ireland."

Lemke (E.) Zum Fangsteinchenspiele. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 274-276.) Cites local names and references to literature concerning the game of "jack-stones" from various regions of Germany, Norway, France, Italy, Greece, Poland, etc.

— Sizilianische Gebäcke. (Ibid., 291-292.) Gives names and brief descriptions of 7 sorts of "folk-bread" from various parts of the province of Trapani, etc., in Sicily.

Lewis (A. L.) On some dolmens of peculiar type in France and elsewhere. (J. R. Anthropol. Inst., Lond., 1910, XL, 336-348, 16 figs.) Treats of dolmen at Trie Château near Gisors, "La Pierre aux Fées" at Villers St. Sépulchre, dolmen La Bellée at Boury, dolmen at Champignolles and compares them with "the Tombs of the Giants" in Sardinia, etc. The dolmens in question have outside the holed stones a portico or shrine. L. thinks that "there are things that do occasionally suggest a northern Asiatic connection amongst the builders of our rude stone monuments."

Loewe (R.) Weiteres über Rübezahls im heutigen Volksglauben. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 126-151.) Continued from Vol. XVIII. Gives numerous items of Rübezahls folk-lore from the southeast, northeast, southwest, and regions of the Isergebirge, Bober-Katzbachgebirge, Rabengebirge, Eulengebirge, Zobtengebirge, including many brief legends.

Logeman-van-der-Willigen (D.) Latinska skolsanger i Sverige och Finland af Tobias Norlind. (Volkskunde, Gent, 1911, XXII, 203-206.) Translation from Swedish of Dr Norlind in *Lunds Univ. Årsskr.*, N. F. Afd. I, Bl. 5. Nr. 2. Treats of Latin school-songs in Sweden and Finland.

Loth (E.) Beiträge zur Kraniologie der Polen. (Z. f. Morph. u. Anthropol., Stuttgart, 1911, XIV, 305-338, 4 pls., 24 figs.) Gives details of measurements and descriptions of 26

Polish skulls from a village graveyard in Zbikow, in the Government of Warsaw, and representing the Masure-type. Comparisons with other Polish material, etc., are made. According to Dr L., the Nowosilka skull, contrary to the opinion of Olechnowicz, "represents not a Nordic, but a somewhat different Slavonic type." The average cephalic index of L.'s Polish skulls is 80.8; the range 74 to 91. The average capacity, males 1440 ccm., females 1190; range for both sexes 1050 to 1650 ccm. The original monograph, of which this is an abstract, appeared in Polish in the *Mater. antrop.-arch. i etnogr. Akad. Um.*, Krakow, 1910, from which it has been reprinted: *Przyczynek do kranilogii Polskiej* (Krakow, 1910, pp. 64).

- v. Löwis v. Menar (A.) Ein russischer Schutzbrief wider den Kometen Halley. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 292-293.) Gives German version of a Russian protective letter against the Halley comet, originally published by the newspaper *Golos Samary*. In Samara such letters were sold by a man in monkish attire just before the appearance of the famous comet.

Maass (E.) Aphrodite und die Hl. Pelagia. (Neue Jahr. f. d. Klass. Alt., Lpzg., 1911, xxvii-xxviii, 457-468.) Discusses the nature, name, etc., of *Aphrodite* ("foam-bright"). She has nothing to do with *Pelagia*.

— Die Schmerzensmutter der Antike. (Ibid., 23-47.) Treats of the goddess Niobe, etc. (contrasting altogether with "golden" *Aphrodite*) in ancient Greece and Rome.

Mahoudeau (P. G.) Une légende anthropologique. (Revue Anthrop., Paris, 1911, xxi, 191-193.) Dr M. reports from his own investigation the development of an "anthropological myth" on the basis of the discoveries of the Abbé Bourgeois at Thenay (department of Loire-et-Cher), to the effect that at Pont-Levoy was the site of the Garden of Eden and that there the bones of the animals of Paradise and also those of Adam had been found.

Mangin (—) De l'emploi des troupes noires. (Ibid., 113-128, 3 fgs.) Discusses, from a military point of view

the physical and moral characteristics of the negro population of French West Africa (Mandingos, Mossis, etc., Ashantis, coast tribes, and others), —the *Peulhs* or *Fulas* Col. M. considers as belonging to the white race. The negro "est mieux qu'un soldat utilisable, c'est un soldat d'élite." The data upon which this good opinion of the negro as soldier is based will be found in the author's book *La force noire* (Paris, 1910.)

Manz (W.) Haussprüche. (Korrbl. d. Schw. Ges. f. Volksk., Basel, 1911, I, 9-11.) Gives 11 house-inscriptions from Bättis, Tils, Portels, Vason, Berchis, and Ragaz.

— Statuten für die Schützenknaben von Melz, 1840. (Schw. Arch. f. Volksk., Basel, 1911, xv, 234-238.) Cites the constitution and by-laws of the boys' rifle-corps of Mels in 1840.

Marmorstein (A.) Genesia oder Parentalia. (Arch. f. Religsw., Lpzg., 1910, xiii, 630-632.) Discusses the signification of the term *genesia* (cf. W. Schmidt's *Geburtstag im Altertum*, 1908). As Schmidt has shown, the *genesia* were birth-day festivities for dead persons, the *genethlia* being such for the living.

Mehlis (C.) Eine Verwallung auf dem Pfänder bei Bregenz in Vorarlberg. (Stzgb. d. Anthr. Ges. in Wien, 1911, 11-12, 1 fg.) Brief account of a prehistoric circular embankment, — probably a lookout or refuge.

Meier (J.) Vom Dichter des Rigiliedes. (Schw. Arch. f. Volksk., Basel, 1910, xiv, 299-304.) Discusses the poems of J. Lüthi, author of the *Rigilied*, and their relations to the works of other poets.

— Gaunersprachliches. (Ibid., 246-247.) Notes on etymology of *Storger*, and on data concerning the language and life of the thieves in the Archives of Basel.

— Das Thurnbuch der Stadt Bremgarten. (Ibid., 1911, xv, 129-137, 193-203.) Gives, from the "prison-book" of Bremgarten in Aargau, 11 confessions of persons accused of witchcraft, etc., from 1642 to 1668. Also (pp. 199-203) the 17th century procedure (in 1645) in the decision of capital offences.

Menghin (O.) Neue Wallburgen im Etschtale zwischen Meran und Bozen.

- (Mitt. d. Anthrop. Ges. in Wien, 1910, XL, 161-180, 9 fgs.) Treats of recently discovered embankments and fortifications in the Etsch valley (Perdonig, Gaid, Tisens, Völlan, etc.) between Meran and Bozen, their situation, finds made, age, etc. Also their relations to similar archeological remains in this region. The ruins of Kasatsch are possibly medieval. Most of these fortifications belong to the late bronze or early iron age.
- Merrick** (W. P.) Shilo: a Devonshire folk-tale. (Folk-Lore, Lond., 1911, XXII, 48-49.) How farmer restored lost baby to pixy and became rich and lived happily ever after.
- Mielke** (—) Über Wiesenbeile. (Z. f. Ethnol., Berlin, 1910, XLII, 792-793, 5 fgs.) Notes on axes (the Arabic writer Jakub of the 10-11th century records such use in the Utrecht country) used for cutting turf and sods in various parts of Germany, etc.
- Millioud** (A.) La fin de la sorcellerie. (Korrbl. d. Schw. Ges. f. Volksk., Basel, 1911, I, 26.) Cites extract from the deliberations of the pastors of Yverdon in 1717, complaining of *devinneresses*, etc.
- Mining in the stone age.** (Amer. Antiq., Benton Harb., Mich., 1911, XXXIII, 42-43.) Notes on the evidences of prehistoric mining (skeletons, stone hammers, torches, use of fire, clay smelting-holes, etc.) revealed by the reopening of the Oural and Aram copper-cobalt mines in Spain.
- Mochi** (A.) L'industria litica della grotta di "Golino" nei monti dell' Uccellina. Talamone, Prov. di Grosseto. (Arch. p. l'Antrop., Firenze, 1911, XLI, 174-187, 3 fgs.) Treats of the stone implements, etc., of the Golino cave at Talamone, in the province of Grosseto, investigated by Zucchi in 1865,—the finds are now in the University Museum of Natural History, Pisa, the remains of animals, etc. The implements from this cave are analogous to those of the N. W. and the extreme S. of Italy and represent the equivalent of the upper paleolithic of central and western Europe,—or it may be a *facies italiana* that may be designated *miolithic*, the name given by Issel to the end of the quaternary.
- Montelius** (O.) Vorgeschichtliche Chronologie. (Z. f. Ethnol., 1910, XLII, 955-962.) Outlines a comprehensive system of prehistoric chronology for Scandinavia and northern Germany, Great Britain and Ireland, France, southern Germany and Switzerland, Italy, Greece, relative and absolute. The various periods of the bronze age, e. g., in different parts of Europe have been more synchronous than has been hitherto generally believed. The passage from the iron to the bronze age, according to M., dates ca. 1100 B. C. In Armenia and the Caucasus iron was very rare in the 12th century B. C. In the discussion, O. Olshausen called attention to the iron ring found by P. Orsi at Castelluccio, seemingly pre-Mycenean.
- Morrison** (S.) The fairy child and the tailor: an Isle of Man folk-tale. (Folk-Lore, Lond., 1910, XXI, 472-475.) Tale recorded from parish of Patrick, of child driven off by exorcisms of tailor.
- de Mortillet** (A.) Fonderie de l'âge du bronze en Danemark. (Rev. Anthropol., Paris, 1911, XXI, 399-406, 7 fgs.) Account of the discovery in 1895 at Haag, in the parish of Thorsager (East Jutland) of the remains of a "foundry" of the recent bronze age, based on Neergard's monograph in the *Mém. Soc. Roy. d. Antiq. du Nord*, 1910. Haag is the only locality in Denmark, where clay moulds have hitherto been discovered. This find confirms the originality in certain respects of bronze-manufacture in Scandinavia, as compared with the rest of Europe.
- Mosebach** (F. W.) Zwei Photographien einer sog. Alsen gemme. (Z. f. Ethnol., Berlin, 1910, XLII, 969-971, 1 fg.) Treats of an "Alsen-gem" (so-called from the island of Alsen, where one of the earliest specimens was found) found in 1903 on a prehistoric site near Bückeberg,—some 50 have been hitherto recorded. They are of glass and have various figures upon them. Whether of heathen or Christian art is doubtful.
- Müller** (J.) Sagen aus Uri. (Schwz. Arch. f. Volksk., Basel, 1911, xv, 69-83.) Some 40 brief legends and stories concerning night-wandering pigs, dancing table, phantoms, black

dogs, witches' stones, "das Greis" (cattle disease), talking animals, the missionary, the beggar, the bleeding bone, the dog of Uri, the vanished treasure of crystal, robbers, Alp-stories, strong people, plague-stories, etc.

Muret (E.) De l'orthographe des noms de lieu de la Suisse romande. (Bull. Soc. Neuchât. de Géogr., Neuchâtel, 1911, xx, 232-249.) Discusses the orthography of place-names in Romansch Switzerland. Cites many examples of "barbaric" pronunciations, which are becoming more common with the spread of popular education and the ease of intercommunication; dialectic spellings and methods of writing names; gain of French *e* mute.

Nebel (—) Land und Leute in der Herrschaft Laubach vor 90 Jahren. (Hess. Bl. f. Volksk., Lpzg., 1911, x, 87-101.) Cites from Ms. of Dr Köhler (d. 1869) information concerning the region of Laubach and its people 90 years ago: Physical and psychical characteristics, physical education of children, mental education, food, drinks, tobacco and snuff, clothing, amusements, activities and professions (list of 27), cemeteries, diseases, superstitions and prejudices, etc.

Olbrich (K.) Ernst Theodor Amadeus Hoffmann und der deutsche Volksglaube. (Mitt. d. Schles. Ges. f. Volksk., Breslau, 1910, xii, 121-149.) Treats of folk-lore in the works of Hoffmann.—his relations to German folk-tales has already been discussed by Benz and Sackheim (the latter makes out cases, in whole or in part, for 53 of the Grimm tales). O. discusses secret and "magical" persons (astrologers, magicians, alchemists, gold-makers, wise women, witches, gipsies, etc.), unusual states of consciousness and magic influencing, the devil, figures of the lower mythology, ghosts and spirits, animals of tale and märchen, beliefs about plants, etiological legends, etc., as made use of by Hoffmann. Hoffmann made good use of the treasures of German folk-lore, uniting often delicate understanding with folk-naïveté, and some of his psychologizing of *sage*-motives ran ahead of modern interpretation (cf. Laistner) of myths, etc.

Palmer (A. S.) The authorized version of the Bible. (Oxf. & Camb. Rev., Lond., 1911, No. 14, 29-47.) Treats of archaisms, obsolete English, misrenderings, etc.

Paret (O.) Über die vor- und frühgeschichtliche Besiedlung des Oberamts Ludwigsburg. (Korr.-Bl. d. D. Ges. f. Anthr., Hamburg, 1911, xlii, 45-46.) Gives account of finds,—paleolithic one only, at Zuffenhausen), neolithic, bronze, iron (Hallstatt and La Teue). In the last period the culture-development seems to have ceased and the country lay waste for some time till occupied by the Romans toward the end of the first millennium A. D.

Parsons (F. G.) Report on the Rothwell crania. (J. R. Anthr. Inst., Lond., 1910, xl, 483-504, 5 fgs.) Gives results of observations and measurements of 100 male and 27 female skulls from the great collection of bones (5,000 or 6,000 individuals in whole or in part; the vault was discovered 200 years; the earliest possible date for its construction is ca. 1180) beneath the old Church of Rothwell, near Kettering, in Northamptonshire. According to P., "the Rothwell skull is a good type and remarkably like that of a modern English person." Comparisons are made with other English data.

— On some Saxon bones from Folkestone. (Ibid., 1911, xli, 101-129, 2 pls., 8 fgs.) Treats with details of measurements and descriptions of 8 skulls (4 probably female; only 2 complete), 15 lower jaws, 6 clavicles, 19 humeri, 5 femora, 20 tibiae, 5 astragali, 6 calcanea,—in all cases some are imperfect,—from a pre-Christian Saxon burial-ground of the "grave-row" type (e. g., near Bremen). The arms, ornaments, etc., and particularly an earthen flask, found in the graves, suggest that these Kentish Saxons may have been Jutes. In the Folkestone Museum with these relics is also a skeleton from the same place discovered in 1907, and believed to be "the only complete skeleton of a pre-Christian Saxon in any museum in the world."

Pascal (C.) La deificazione di Augusto. (Rend. R. Ist. Lomb., Milano, 1911, II s., xlii, 438-449.) Well-documented discussion of the deifica-

- tion of the Emperor Augustus and the popular conception of it, with special reference to signs, portents, etc.
- Pastor (W.)** Über Stonehenge. (Z. f. Ethnol., Berlin, 1911, XLIII, 162-173.) Discusses the theory of Schuchardt that Stonehenge is a grave, not a temple, which P. controverts, holding that the arrangement of the triliths, the orientation, the connection of folk-ceremonies (summer solstice) with Stonehenge, etc., demonstrate its character as "a temple of the sun." See also Schuchardt's article on Stonehenge in the *Prähistorische Zeitschrift*, Bd. II, 1910, 292-340.
- Patrin (E. M. L.)** Tcheremisses et tchouvaches. (Rev. Anthropol., Paris, 1911, XXI, 141-147, 1 fig.) Text (with notes by G. Hervé), now published for the first time, of a paper read before the Société des Observateurs de l'Homme (Paris) March 14, 1800, by the geologist and mineralogist Patrin (1742-1815). Notes on the Cheremiss village of Imangache, the Chuwash village of Tchebaxar, etc., clothing, habits and customs, shamans, etc.
- Peeters (T.)** Oude Kempische liederen, met zangwijzen en klavierbegeleiding. (Volkskunde, Gent, 1911, XXII, 133-143, 183-189.) First two sections giving text and music of 8 old folk-songs from the region of Kempen.
- Pellandini (V.)** Briciole di folklore ticinese. (Schw. Arch. f. Volksk., Basel, 1910, XIV, 191-198.) Gives dialect texts of numerous Ticinese lullabies, prayers, children's songs used in games, dances, etc., inscriptions of ownership in books, invocations, satirical songs on professions, etc. On pages 194-196 are described 6 children's games.
- Amore e matrimonio nella lingua del popolo ticinese. (Ibid., 1911, XV, 244-247.) Cites items concerning love and marriage in the folk-speech of Ticino,—verses on love-making, proverbs, dialogue of girl asking her mother for a husband, and of mother offering a husband to her daughter.
- Miscellanea. (Korrbl. d. Schw. Ges. f. Volksk., Basel, 1911, I, 34-35.) Six folk-lore items from Taverne, etc.: Exclamations of card-players, answer to "what have you eaten?" description of laziness to child by grandmother, response of mother to question of children, "what have you brought nice for us?" terms of contempt, terminal-formulae of stories.
- Pittard (E.)** L'indice nasal et le développement des dimensions du nez en fonction de la taille chez 1,266 tsiganes des deux sexes. (Rev. Anthropol., Paris, 1911, XXI, 102-108.) Discusses in relation to development of nose and stature the nasal indices of 1,266 gipsies (m. 841, f. 425), chiefly Rumanian. The male index averages 70.87, the female 68.96; women have a nose absolutely and relatively smaller than men.
- Platzhoff (J.)** La chalenda mars dans la Haute-Engadine. (Schw. Arch. f. Volksk., Basel, 1910, XIV, 250-251.) Treats of the *chalenda mars*, a singing-custom of children on March 1,—the origin dates from the time of the Romans.
- Quente (P.)** Über einen langobardischen Urnenfriedhof bei Dahlhausen, Kr. Westpriegnitz. (Ztschr. f. Ethnol., Berlin, 1911, XLIII, 163.) Brief note. Details will appear in the *Prähistorische Zeitschrift*, Bd. III, 1911.
- R. (H.)** Voor't oude stadsbeeld, Antwerpen. (Volkskunde, Gent, 1911, XXII, 206-208.) Treats of wells and saints'-images in old Antwerp.
- R. (M.)** Coutumes de Blonay. Au mariage et à la naissance. (Schwz. Arch. f. Volksk., Basel, 1911, XV, 95-96.) Cites, from the Ms. *Glossaire du patois de Blonay* of Mme. Louise Odin a number of terms *Aliyāsè* (alliance)—*tsermalāi-airé* (garçon. demoiselle d'honneur) relating to customs of birth, marriage, etc. Also a few proverbs.
- Rasch (J.)** Uit de folklore van ons gebak. (Volkskunde, Gent, 1911, XXII, 14-18.) Items of folklore concerning Dutch pastry, etc.,—names of cakes, bread, etc., are given, particularly those of holiday seasons, weddings, and the like.
- Reinecke (P.)** Zum Alter der Hochäcker in Süddeutschland. (Korr.-Bl. d. D. Ges. f. Anthr., Hamburg, 1911, XLII, 1-6.) Discusses the age of the "Hochäcker" of southern Germany.

According to R., the cultivation here practiced represented "far from being a peculiarity of one stock or people, has been conditioned by the use of the plough with moulding-board." The agriculture in question is not at all due to the Celts and Romans. The limits of such cultivation correspond with those of recent parcelling, etc.

Reubel (G.) Hochäcker bei Rastatt. (Korr.-Bl. d. D. Ges. f. Anthr., Hamburg, 1911, XLII, 25-28, 4 fgs.) Treats of the "Hochäcker," observed by the author near Rastatt, the first of the sort to be reported from Baden.

Reymond (M.) Légendes populaires et chansons de gestes en Savoie. (Schwz. Arch. f. Volksk., Basel, 1911, xv, 98-100.) Notes on M. van Genep's recent article with this title in the *Revue des Idées* for Nov. 15, 1910. R. does not accept all v. G.'s explanations of the names *Sarasin*, etc., in Switzerland and Savoy.

— Le journal d'un paysan vaudois en 1620. (Ibid., 214-226.) Gives pp. 219-226) numerous extracts from the diary of Claude Carrard, a peasant of Poliez-Pittet in the Vaud country. The *livre de raison* begins with Jan. 16, 1620, and closes with April 16, 1639. The extracts given relate to accounts, etc.

— Remèdes et recettes d'autrefois. (Ibid., 1910, xiv, 257-267.) Gives numerous items of folk-medicine, charms, etc., against enemies, sorcerers, evil spirits, fire, etc., from a collection of recipes, etc., from the region of Aigle, belonging to the 18th century. A list of lucky and unlucky days is given on p. 258.

Robarts (N. F.) and Collyer (H. C.) Additional notes upon the British camp near Wallington. (Man, Lond., 1911, xi, 38-41, 103-106, 1 fg.) The first part describes excavations of July, 1905 and general character of remains. The first construction of the camp may have been in neolithic times,—the bronze age came later, then mixture of Roman and medieval remains. Part II treats of the finds: flint pebbles (for defence), saddle-back meal-stones, cooking-pots, pierced clay tiles (supports for pots or food when cooking), hearths, pottery, clay, whorls and loom-weights,

stone implements, bronze brooch, animal bones, charred grain and seeds in cooking pots, etc. No trace of iron.

Romagna-Manoia (A.) Un caso di ipertricosi universale. (Atti d. Soc. Rom. di Antrop., Roma, 1910, xv, 373-386, 1 pl.) Anthropological (measurements of body, head and face; teeth, hair distribution, etc.) and psychological notes (notable mental and ethical defects), on a case of universal hypertrichosis in a girl of 15 years from Lusena (Roma) in the Asylum of S. Maria della Pietà, in Rome. Stature 1,250 mm., ceph. ind., 70.3. At pp. 379-385 the general question of the origin, etc., of hypertrichosis is discussed. Morbid heredity appears in this case.

— Un caso di albinismo parziale. (Ibid., 387-391, 1 fg.) Treats of a case of partial albinism (involving the left side of the abdomen from the umbilicus down, including part of the hairs of the genital region) in a young woman of 21 years, epileptic, etc., in the Asylum in Rome.

Rossat (A.) Les "Fôles." Contes fantastiques patois recueillis dans le Jura bernois. (Schw. Arch. f. Volksk., Basel, 1911, xv, 18-42, 151-177.) Gives dialect texts and literary French versions of 12 *fôles* or fanciful tales from the Catholic Bernese Jura. These tales treat of animals, fairies, kings' daughters, Jean l'Ours, shepherds and goat-herds, feeble-minded boy, Silly John and Wise John, etc.

— Lettre suspendue en l'air. (Ibid., 117-118.) Gives copy of a letter written in golden characters, "suspended in the air" at Württemberg in 1747, from another copy dated 1784, found in the region of la Croix de Luisant, Aubonne.

— Les Chansons du travail. (Korrbl. d. Schw. Ges. f. Volksk., Basel, 1911, i, 25-26.) Cites text and music of pile-driving song used at Lausanne, in connection with the tunnel-works in 1872. See Stoecklin (A.).

Rother (K.) Zusammensetzungen mit "voll." (Mitt. d. Schles. Ges. f. Volksk., Breslau, 1910, xii, 218-223.) Cites numerous compounds in *voll* from the Silesian dialect of German.

- such, e. g., as *hamfel* (handful), *ormwel* (armful), *mitsfel* (capful), *tupfel* (potful), *fósvel* (cask-ful), etc. The retention of the genitive formation,—instead of the example of the literary German “einen Becher Weines,” or “ein Arm voll Holzes,” we have “a šofels woser,” “a hamfels arbsa,” etc.
- Rutot** (A.) La chronologie des ossements quaternaires de l'Europe. (Korr.-Bl. d. D. Ges. f. Anthr., Hamburg, 1911, XLII, 13-22.) Discusses the chronology of quaternary osseous human remains from the oldest,—the jaw of the *Homo Heidelbergensis*, middle level of the lower quaternary (Maffian industry) down: Galley-Hill and Grenelle (Strépyian industry), etc.
- S.** (E. A.) Vernageln im kirchlichen Brauch. (Schwz. Arch. f. Volksk., Basel, 1911, XV, 111-112, 1 fg.) Note on custom of driving nails into easter-candles in Lombardy and Ticino. Nails are also driven into wooden crosses.
- S.** (J.) Moyens contre les verrues. (Korrbl. d. Schw. Ges. f. Volksk., Basel, 1911, I, 27.) Cites 3 folk-remedies for warts.
- Saintyves** (P.) Les résurrections d'enfants morts-nés et les sanctuaires à “répit.” (Rev. d'Ethnogr. et de Sociol., Paris, 1911, II, 65-74.) Treats of the “resurrection” of still-born children by miraculous rites at shrines of the Virgin Mary (the special chapels were known as *répits*), particularly in eastern France, at various periods from the late Middle Ages down to the middle of the 19th century. Some interesting particulars are given,—practices of the kind in question still continue in certain localities, with, more or less, the approval of the ecclesiastical authorities.
- Salzmann** (L. F.) Medieval by-ways. I. Occultism. II. Highways. III. Coronations. (Oxf. & Cambr. Rev., Lond., 1911, No. 13, 69-88; No. 14, 65-77; No. 15, 33-43.) Treats of the alchemists, white magic, black magic; the embassy of Geoffrey of Langley to the Tartar court in 1292; the coronation of Edward III, etc.
- Sättler** (F.) Albanesische Volkslieder. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 173-176.) German texts only of 7 brief Albanian folk-songs (3 love-songs) collected in 1910 by the author in the neighborhood of Avlona, in southern Albania.
- Schache** (H.) Sagen aus Dürrenleina, Thüringen. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 286-287.) Cites 7 brief legends (wild huntsman, house-demon, Frau Holle, dragon, fiery dog, Bilwitz, snake-king).
- Schenck** (A.) Étude sur l'anthropologie de la Suisse. Troisième Partie. (Bull. Soc. Neuchât. de Géogr., Neuchâtel, 1910, XX, 313-367, 2 pls., 1 fg.) Treats of the physical anthropology of Switzerland in the bronze age. Crania and skeletons from the pile-dwellings (Corcelles, Concise, d'Auvernier, Mörigen, Ile de Saint-Pierre, Steinberg de Nidau, Lac de Luissel, Wollishofen, Canal de la Thielle, Canal de la Broye, Estavayer) and from the burial-places (stone cists, fire burials, funerary urns, incinerations) of Montreux, Villeneuve, Plan d'Essert, Boiron, Bienne, etc. Tables of measurements are given. Pages 351ff. are occupied by a general discussion of the human races of the bronze age in Switzerland. Of the 38 bronze-age skulls from the pile-dwellings 60.51 % are dolichocephalic, 15.78 % mesaticephalic and 23.67 % brachycephalic,—here two principal races are represented, a northern doliocephalic and a Ural-Altaic brachycephalic. The skulls from burial-places (very rare) also indicate the preponderance during the bronze age of the dolichocephalic northern race. In an appendix the crania of Châtelard sur Lutry, Montagny sur Lutry, the neolithic graves of Hermance, the dolmen of Auvernier, etc., are considered. According to S., the *Sion* type is to be merged with the dolichocephalic northern race.
- L'abri sous roche du vallon des Vaux, Canton de Vaud, Suisse. (Rev. Anthropol., Paris, 1911, XXI, 18-28, 5 fgs.) Treats of the rock-shelter of the des Vaux valley examined in 1909,—situation (several strata all neolithic), objects of human provenance (pottery; stone tools and implements, quite numerous; hearths), remains of animal and vegetable food, bone

implements, etc. In one of the strata several burials of adults and children were discovered. In the walls of the shelter are a number of cavities possibly for "roof-beams" or the like. On the rock are also several engravings of animals (horse, deer, etc.). According to Dr S., this prehistoric "station" is altogether neolithic and "proves the existence of land populations in Switzerland contemporary with the lake-dwellers of the polished-stone age."

Schmidt (B.) Neugriechische Volkskunde. (Neue Jahrb. f. d. Klass. Alt., Lpzg., xxvii-xxviii, 643-669.) General discussion of the nature and origin of modern Greek folk-lore and folk-speech. According to S., the *Koine* is a new form of speech, but not a new language. S. does not agree with Dieterich that modern Greek folk-lore does not go back of the period of Hellenism.

— (H.) Vorläufiger Bericht über die Ausgrabungen 1909-1910 in Cucuteni bei Jassy, Rumänien. (Z. f. Ethnol., Berlin, 1911, XLIII, 582-601, 15 figs.) Treats of the character of the settlement as revealed by the pottery remains, etc. (two periods of settlement are to be distinguished; the older has pottery with polychrome painting and incised ornamentation; the later pottery with black and red painting. The fortifications belong partly to one period and partly to the other. Among the finds at Cucuteni are numerous flints, flat stone axes and perforated hammer-axes, bone and horn implements and weapons, polished horn axes, clay figures (from both periods), copper, bronze and iron objects. Cucuteni represent a stone-copper period, and this period in the Danube valley is notable by reason of its relations with the Aegean culture,—this the author discusses on pages 398-408 (the parallelism between north and south appears most remarkably in the metal industry). The bridge between Crete and the Danubian-Balkan region is Thessaly.

— Beitrag zur Bedeutung der Kammmuster. (Ibid., 161-163, 3 figs.) Discusses the "comb pattern" ornamentation of pottery of Thessaly (Dimini) and the lower Danube country (Tordos), etc.—the double

comb appears also on the disc of Phaistos (ca. 18th or 17th cent. B. C.). They are sometimes mere ornamentation, at others signs resembling writing or intended as such; they had wandered to Crete from the north.

Schoonjans (A.) Melk en zuivel in de volkstaal. (Volkskunde, Gent, 1911, xxii, 85-93.) Gives items of folk-lore and folk-speech concerning milk and milk-products in Flemish Belgium, etc.

Schuchardt (C.) Stonehenge. (Z. f. Ethnol., Berlin, 1910, XLII, 963-968.) S. argues that Stonehenge (with related structure) is not a solar temple, but a burial-place, resembling similar ones in ancient Greece. In the discussion, W. Pastor opposed and Hr Strauch supported S.'s theory.

— Ausgrabungen auf dem "Heiligen Stadtberge" bei Schöningen, Colbitzow. (Ibid., 973-974.) Notes on recent excavations and finds (pottery fragments $\frac{1}{10}$ Slavonic, $\frac{1}{10}$ Teutonic on the high-surface; in ditch none Slavonic). Other Teutonic and Slavonic remains are distinguished.

Schulte (O.) Das Kindergebet im Grossherzogthum Hessen. (Hess. Bl. f. Volksk., Lpzg., 1911, x, 1-16.) Based on *questionnaire* of the Hessian Folk-Lore Society in 1907,—numerous examples, Catholic and Protestant. Form and content, distribution, etc., are discussed. Form, rhyme, figures, testify to the adult origin of children's prayers. The two types are the "thou" prayer and the recitation-formula. In these prayers the belief in angels is prominent. Although many prayers are common to both religions, Catholics and Protestants have their own peculiar ones, conforming to the different church tenets. Luise Hensel's hymn, "Müde bin ich, geh zur Ruh," has become a prayer with Catholics, and even Jews have been heard to sing this Protestant poem, which has conquered all Hesse. Even jest has crept into some of the children's prayers. Some localities have almost characteristic prayers. Like the folk-songs, children's prayers are tending to disappear in many places.

Schulten (A.) Termantia. Eine Stadt der Keltiberer. (Neue Jahrb. f. d. Klass. Alt., Lpzg., 1911, xxvii-

XXVIII, 241-276, 4 fgs., 2 maps.) Treats of Termantia, a city of the Celtiberians (sister-town of the more famous Numantia) in the interior of Spain (Old Castilian province of Soria). Situation, history, ruins are described.

Schütte (O.) Volkstümliche Obst- und Speisennamen im Braunschweigischen. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 276-278.) Gives folk names of fruits and foods from various parts of Brunswick.

Schwerz (F.) Untersuchungen über das Wachstum des Menschen. (A. f. Anthrop., Brnschw., 1911, N. F. X, 1-38, 19 fgs.) Gives, with many tables and curves, the results of measurements (stature, weight, length of trunk and limbs, circumference, length, breadth, height and indices of head, face measurements, etc.) of 1,778 (m. 960, f. 818) individuals for stature and weight and 1,245 (m. 721, f. 524) for other data, of whom all but 51 were between 6 and 20 years of age, and all from the country population of the canton of Schaffhausen, Switzerland. Physically the type is a mixture of the immigrant, northern blond, dolichocephalic Alemani, and the brunette, broad-headed so-called Alpine race (predominating). The head-form is hypsibrachycephalic (av. index 82.5); face mesoprosopic (index 90.6) with strong tendency toward leptoprosopic; stature av. for adult males 1694 mm. The stature-difference between the Nordic and the Alpine-Mediterranean group appears in early childhood and is not delayed till puberty,—environmental influences are also in evidence. Sex differences and class differences (poor and well-to-do) are noted. The nasal index diminishes with growth. Puberty occurs later in the North. Tall children have a relatively smaller head-circumference than shorter ones. In the bibliography one misses reference to the Toronto (Can.) data.

Sera (G. L.) Sul significato della platicefalia con speciale considerazione della razza di Neanderthal. (Arch. p. l'Antrop., Firenze, 1910, XI, 381-432, 1 pl., 13 fgs.; 1911, XII, 40-82, 7 fgs.) Discusses flattening (absolute and relative) of the vertical diameter of the skull as

an individual physio-pathological fact and as a physio-pathological fact more or less diffused in an ethnic group, significance of the platycephaly of the Neanderthal race, zones of platycephaly and zones of glaciation, descent of man and the Neanderthal race, outlines of a general theory of the human skull, etc. Dr S.'s general conclusions are: the height of the skull is one of the most variable elements individually for physio-pathological reasons; diverse causes may be responsible for the diffusion in an ethnic group of cases of physio-pathological flattening of the skull; the platycephaly of the race of Neanderthal is not pithecoïd but is well comparable to that of many ethnic groups existing to-day, and it is due probably to "a passive adaptation to glacial climate"; the platycephaly of other human groups is capable of a like explanation,—platycephaly coincides in its distribution with the geographic zones of glaciation; the Gibraltar skull represents the last or one of the very last of the "precursors" of man; the human skull has evolved from dolichocephalic to brachycephalic,—this has taken place gradually.

— A proposito di due recensioni del Sig. P. Bartels. (Ibid., 1911, XII, 192-196.) Points out "inaccuracies, etc.," in Dr Bartels' review of the author's two articles on the Gibraltar skull.

Sergi (S.) Mancanza congenita ed ereditaria di un incisivo. (Atti d. Soc. Rom. di Antrop., Roma, 1910, xv, 395-399.) Treats of a case (a young Piedmontese teacher) of congenital lack of the upper right lateral incisor.—his father, two brothers and two sisters (all older) had the same defect, as had also an uncle (only brother of father) and the paternal grandmother. In all cases also there was a notable reduction of the left upper lateral incisor. This is probably a phenomenon of transition.

Smith (H. H.) A North Holland cheese market. (Nat. Geogr. Mag., Wash., 1910, XXI, 1051-1066, 17 fgs.) Brief account of cheese-market of Alkmaar. Some of the illustrations show dress, etc., of the people of the island of Walcheren.

- Speight** (E. E.) A few Norwegian proverbs. (Folk-Lore, Lond., 1911, XXII, 213-218.) Cites from various parts of Norway, with English translations, 55 proverbs mainly typical of farm-life. They are in the *landsmaal* or country speech.
- Stationary population of France (The).** (Pop. Sci. Mo., Lancaster, Pa., 1911, LXXIX, 615-617, 4 fgs., 2 maps.) Résumés data in J. Bertillon's recent book.
- Stoecklin** (A.) Arbeitslieder. (Korrbld. Schw. Ges. f. Volksk., Basel, 1911, I, 6-8.) Notes on Swiss work-songs: rising-song from the Saanental, berry-picking song from the Zürich Oberland, turnip-sowing song from Basel, pile-driving song, mowing-song, etc. See Rossat, A.
- Stückelberg** (E. A.) Die Johannis-haupter. (Schw. Arch. f. Volksk., Basel, 1910, XIV, 287-290, 1 fg.) Treats of the head of the decapitated John the Baptist as decorations of bowls (part of the liturgical apparatus of the Middle Ages still surviving in certain places). These "St. John heads" were given by those suffering from severe headaches,—drinking out of the bowls was a cure. The oldest figure of a "head of St. John" appears on a seal of 1344 A. D., and all those still in existence seem to belong to the 15th and following centuries. None has yet been found in the Romance region. Most of them are now in private and public collections. The author enumerates 21 specimens.
- Tack** (P.) De folklore in de heksen-processen te Mechlen. (Volkskunde, Gent, 1911, XXII, 5-14.) Treats of folklore in the witches' trials in Mechlin from 1544 to 1643, particularly during the period 1620 to 1640,—folk-medicine, sorcery, and belief in the devil. The author intends to publish a comprehensive work on the Mechlin witch-trials.
- Tagliaferro** (N.) Prehistoric burials in a cave at Bur-meghes, near Mkabba, Malta. (Man, Lond., 1911, XI, 147-150.) Treats of the discovery of human remains (35 skulls have been already found) in a natural cave, together with fragments of pottery, rare pieces of flint, animal bones, etc. The pottery belongs to the age of the megalithic monuments of Malta. The corpses seem to have been "laid down horizontally on their left side, in several cases in a crouching position looking east." The skulls and sides were propped up with poles and flat stones were used to underlie or to cover the skeletons.
- Tschepourkovsky** (E.) Anthropologische Studien. (Archiv f. Anthrop., Brnschw., 1911, N. F. X, 151-186, 7 fgs., 2 maps, tables.) Résumés the results of the author's measurements (made in 1900-1910) of 800 skulls, 3,000 Great Russian peasant women, 2,000 children, 500 men, 164 Russian girls, 118 Jewish boys, and 80 families. Topics discussed are changes in the basis of the skull in the transition to brachycephaly, the tendency of the basis to assume a fixed form for each race, the heredity of the index, color of hair and eyes, the resemblance between men and women of the same race (almost twice as great as that between brother and sister, mother and son, etc.), appearance of racial characters in childhood (10 year old Jewish boys), types of the orthodox Slavic population of Great Russia (blond brachycephalic, rather tall; darker, more dolichocephalic, lower stature, longer face,—the latter a survival of primitive population of the Kurgans of the 7th to the 9th century, and probably of Finnish stock, driven eastward by the blond, brachycephalic Valdai type), etc.
- Van der Graft** (C. C.) Christus is opgestanden. (Volkskunde, Gent, 1911, XXII, 45-52.) Treats of the old Easter hymn "Christus is opgestanden," still sung at the market-place in Ootmarsum (Overijsel) on Easter Sunday. The Dutch text is given on pages 50-51.
- Verneau** (R.) La couvade en Espagne. (L'Anthropologie, Paris, 1911, XXII, 246-247.) Discusses the article on the *couvade* in Spain by Dr Aranzadi, in *Anthropos* for 1910. An investigation is now advisable to determine whether the idea of the *couvade* is not altogether a myth. Dr D. J. Fuset reports its non-existence on the island of Ibiza, one of the Balearic group, where it has been said to prevail.
- Verworn** (M.) Die Anfänge des Zählens. (Korr.-Bl. d. D. Ges. f.

- Anthr., Hamburg, 1911, XLII, 53-55, 5 fgs.) Discusses the origin of counting with special reference to the notched bones from the reindeer-epoch of prehistoric France. Dr V. is of opinion that counting by notching was already in use at that early period.
- Die Ausgrabung des neolithischen Dorfes bei Diemarden. (Ibid., 46-52, 11 fgs.) Gives result of excavations of neolithic village-site of Diemarden near Göttingen. Method of building, stone implements (flints; polished), pottery (enormous quantity of fragments; great variety, but typical linear "Bandkeramik" predominates), animal bones, etc. (remains of meals), ornaments of stone (pendants, etc.).
- Viasemsky (S.) Contribution à l'étude de l'anthropologie des Juifs. (L'Anthropologie, Paris, 1911, XXII, 197-201.) Discusses briefly the composition of the Jewish people and their physical development, with special reference to the Slavonic countries. Prince V. concludes that the long-continued and severe laws against intermarriage with foreigners "have created the atmosphere of solidarity in which they live to-day." The most important element was brachycephalic. With rare exceptions, the Jews have shown themselves less developed physically than the peoples among whom they dwell.
- Vierkandt (A.) Hat der Bauer eine eigene Naturauffassung? Eine Anfrage. (Hess. Bl. f. Volksw., Lpzg., 1911, X, 125-127.) Discusses the question whether the peasant has nature-concepts of his own, like so many primitive peoples. If he lacks such concept Dr V. is inclined to attribute it to church-influence,—a phenomenon of arrest due to the influence of the higher urban culture and particularly to the teachings of the church. Dr V. desires answers to this *questionnaire*.
- Virchow (H.) Über ein Becken mit ungewöhnlich langem Steissbein. (Z. f. Ethnol., Berlin, 1911, XLIII, 622, 1 fg.) Note on a male pelvis with a coccyx 60 mm. long,—there are but five vertebrae, and the great length is due to the third coccygeal vertebra.
- Über einen menschlichen Schädel von Oberhausen im Rheinland. (Ibid., 622-627, 4 fgs.) Discusses, with report of Hr Bärtling (a geologist) as to the circumstances of its finding, etc., a skull (index 71.8) from Oberhausen, which probably belongs to some civilized race and not to diluvial man.
- Über eine tätowierte Deutsche. (Ibid., 271-272.) Notes on a German girl, tattooed by an Englishman, on exhibition in Castan's Panoptikum. The tattooing is extensive, many-colored, and artistic.
- Ein Becken mit sehr stark entwickeltem Sulcus praeauricularis. (Ibid., 1910, XLII, 920-923, 2 fgs.) Treats of a female pelvis (European) with a very marked *Sulcus praeauricularis* (noted by Henle in Javanese and by Virchow in Greenland Eskimo). The cause of the peculiarity is still somewhat uncertain.
- u. von Buchwald (G.) Fragment eines Schädels aus einem neolithischen Begräbnisplatze. (Ibid., 1911, XLIII, 133-135, 5 fgs.) Treats of a skull from a neolithic burial-place in Bannerbrück, Mecklenburg-Strelitz, with low flat forehead, prominent frontal bases, and large orbits, suggesting a primitive form. Pottery fragments were also found.
- Walker (R. J.) A fragment of Greek music. (Oxf. & Cambr. Rev., Lond., 1911, No. 15, 113-119, 1 pl.) Describes a Ms. (probably subsequent to taking of Constantinople), in which over the first few lines of the first chorus of the *Clouds* of Aristophanes are written certain musical notes, given "in a miniscule modification of the characters employed in antiquity to express the notes of instrumental music." W's Ms. differs here from the Messina Ms. of Kircher.
- Wallner (H.) Die jährliche Verschiebung der Bevölkerung von der Siedlungsgrenze durch die Almwirtschaft im Lungau. (Mitt. d. k.-k. geogr. Ges. in Wien, 1911, LIV, 358-403, 3 fgs.) Treats of the economics, sociology, etc., of the *alm* country of Lungau,—a sort of "half-nomadism in the midst of European civilization," as Ratzel styled the *alp* and *alm* cultures.
- Wehrhan (K.) Das Hickelspiel in Frankfurt a. M. (Z. d. Ver. f.

- Volksk., Berlin, 1911, 234-243, 10 fgs.) Treats of "hop-scotch" and its varieties as played by the children of Frankfort on the Main. Details of the game, diagrams, etc., are given. The Frankfort name *Hickel-spiel* signifies "hop play." Each variety has its special name, two of which are "German circle," "French circle." Another sort is called after the snail; a fourth from the letter N, etc.
- Einige schweizerische Freimaurer-Sagen. (Schw. Arch. f. Volksk., Basel, 1910, XIV, 295-299.) Gives 5 legends from various parts of Switzerland concerning the Free Masons,—how a Free Mason dies, treatment of traitors, great Free Mason festival, initiation-tests, the girl who would not marry a Free Mason.
- Westropp** (T. J.) A folk-lore survey of County Clare. (Folk-Lore, Lond., 1910, XXI, 476-487; 1911, XXII, 49-60, 4 pls.; 202-213, 2 pls.) Numerous items concerning supernatural animals (*peists* and dragons, water-cattle, *púcas* and horses, bulls, dogs, seals, rabbits, birds), spectral lands and cities (Hy-Brasil, Kilstuithen, Cullaun, etc.); cursing-stones (at Carnelly, etc.), amulets (Ennis bead, Westropp ring, Molony ring), wishing, foundation-sacrifices, burial and skull beliefs, cures, prophylactics, miscellaneous charms; lucky and unlucky deeds, omens, dreams and divination, calendar-customs, wells and well-customs (healing powers, offerings, etc.).
- Williams** (C. A.) Zu Uhlands Volksliedern, Nr. 43. (Mod. Lang. Notes, Balt., Md., 1910, XXV, 244-245.) Points out that the song "Es ist ein Schnee gefallen" is from a collection of *Drey schöne neue Lieder*, published probably at Strassburg about 1570.
- Wittich** (E.) Abergläubische Festgebräuche der Zigeuner. (Schw. Arch. f. Volksk., Basel, 1910, XIV, 268-271.) Notes on superstitious observations and customs of the Gipsies at Christmas (Holy Night is of great importance,—spirits have peculiar power over men and animals), Easter (luck, dreams, etc.; owl and cuckoo; portents for coming year), etc. The author is himself a Gipsy.
- Zaubersformeln und Zaubersagen der Zigeuner. (Ibid., 1911, XV, 115-117.) Gives some 10 Gipsy charms, etc., for children, cattle, horses, and other animals.
- Zaborowski** (S.) La grèce antique et sa population esclave. (Rev. Anthropol., Paris, 1911, XXI, 245-258.) Treats of the slave-population of ancient Greece: Great growth of slavery coincident with contempt for manual labor especially and the development of oratory, etc.—softening, deterioration, etc., of Greek mind; stealing, abandonment and sale of children, other sources of slaves; cost and wages of slaves; incomes of citizens derived from work of slave artisans, etc.; in the fifth century $\frac{2}{3}$ of the population of all Greece were slaves; manumission, etc. (more female than male); state prostitutes (some of great influence); nationality of slaves (a list of 124 manumissions includes Syrians, Thracians, Galatians, Italians, Armenians, Sarmatians, Illyrians, Cappadocians, Phrygians, Lydians, Mysians, Pontians, Phenicians, Jews, Egyptians, Arabs, Paphlagonians, Bithynians, Cypriots, Bastarnians),—of these 124 only 24 were Greek; prices of freedom (of 162 cases range for males 300-2,000 dr.; 312 female ransoms, 300-1,500 dr.) much above original cost.
- Zachariae** (T.) Etwas vom Messen der Kranken: Der rohe Faden. (Z. d. Ver. f. Volksk., Berlin, 1911, XXI, 151-159.) Treats of "measuring the sick" with citations from Tamburini's *Explicatio Decalogi* (1675), and numerous other authorities, particularly the use of "ein rohe Faden," i. e., natural, unprepared, a condition favorable to "magic" use.
- Zahler** (H.) Volksglaube und Sagen aus dem Emmenthal. (Schwz. Arch. f. Volksk., Basel, 1911, XV, 1-17.) Folk-lore collected in 1903, chiefly in Langnau. Days of the week (Wednesday unlucky); holidays, festivals, saints'-days, etc.; weather-lore; influence of moon; folk-medicine; miscellaneous beliefs; wedding, birth and baptism, death-omens, funeral-customs; the "Döggeli"; witches; numerous brief stories of vanished towns, dwarfs, treasure,

phantoms, strange men and women, etc.

Zengel (W.) Die prähistorischen Rinderschädel im Museum zu Schwerin und deren Bedeutung für die Geschichte der mecklenburgischen Rindviehzucht. (A. f. Anthropol., Brnschw., 1910, N. F. IX, 159-178.) Treats of the skulls of prehistoric *Bovidae* (measurements, etc.).—*Bos primigenius* Boj., *B. taurus primigenius*, *B. t. brachyceros*, from various localities in Mecklenburg, compared with other similar remains elsewhere. The skulls from Gr.-Renzow (female), Toddin (male) represent the *Ur* or *B. primigenius*; those of Petersdorf and Malchin crosses of the *Ur* and domestic cattle; the other skulls belong to the group of the *B. taurus brachyceros*. The *B. primigenius* was not rare in prehistoric Mecklenburg. The original native Mecklenburg cattle were the "red cattle."

Zindel-Kressig (A.) Schwänke und Schildbürgergeschichten aus dem Sarganserland. Dritte Reihe. (Schwz. Arch. f. Volksk. Basel, 1911, xv, 112-115.) Gives 20 items of jests. folk-wit, etc., from the Sargans region.

AFRICA

Alexander (D.) Notes on ornaments of the Womdeio pagans, etc. (Man. Lond., 1911, xi, 1, 1 pl.) Notes on ornaments of females from early childhood to marriage (ear-piercing, bead-strings increased in number with age,—at marriage leather strips are substituted, iron bangles, etc.).

Balfour (H.) Modern brass-casting in West Africa. (J. R. Anthr. Inst., Lond., 1910, xl, 525-528, 2 pls., 2 fgs.) Treats of specimens of the work of Ali, a native Yoruba artist (some are now in the Pitt Rivers Museum), with an account of his methods by the artist himself (the three stages in casting a brass head, etc.). Other of Ali's more ambitious group-designs are figured on one of the plates. These products fall short of the Benin castings, but "are none the less very creditable," and they "betray a considerable knowledge of the higher *cire perdue* technique."

Barrett (W. E. H.) Notes on the customs and beliefs of the Wa-Giriama, etc., British East Africa. (J. R. Anthropol. Inst., Lond., 1911, xli, 20-39, 3 fgs.) Pages 20-28 treat of the Wa-Giriama, a pure Bantu people of the Kilifi-Sabaki region: Marriage (beer-ceremony) and sexual relations, circumcision; death, burial, etc. (grave-monuments; murder, suicide; fear of ghosts); property, inheritance, slaves; food, cattle; fire-making (two sticks); dance to drive out devil; *mehele* dance. Pages 29-37 deal with the Wa-Sania, who show Galla influence, and have abandoned their original language. Clan-divisions; marriage, intercourse of sexes, etc.; birth and early childhood; property and inheritance, fire; food, death, burial, mourning, murder; blood-brotherhood, chieftainship, miscellaneous items (divisions of time, superstitions, origin-legends). On pages 37-39 are given the English texts only of 6 "fairy-tales" (beast-fables).

Bartels (P.) Zur Anthropologie der Plica semilunaris bei Herero und Hottentotten. (Z. f. Ethnol., Berlin, 1911, xliii, 616.) Résumé of paper to be published in full in the *Archiv f. mikroskopische Anatomie*. Reviews literature and gives results of our observations. Relative frequency of occurrence of cartilage in P. L. (48 %),—rare in whites, normal in anthropoids.

Béguin (E.) La famille chez les Marotsé, Haut-Zambézie. (Bull. Soc. Neuchât. de Géogr., Neuchâtel, 1910, xx, 368-378.) Treats of marriage (wooing, betrothal, wedding; adultery common; royal marriages; polygamy, etc.) and childhood (pregnancy, child-birth; names; baby-carrier; clothing; child workers; dolls; seclusion and initiation of nubile girls) among the Marotse of N. W. Rhodesia.

Bell (H. H.) Recent progress in Northern Nigeria. (J. Afric. Soc., Lond., 1911, x, 377-391, 2 pls.) Approves of "continuity of policy" and "peaceful penetration." Treats of the pacification of the country by Sir F. Lugard since 1900, the campaign against Kano, Sokoto, etc. The fundamental principles of our ad-

ministration in Northern Nigeria "have rested on the policy of guiding improving native rule in such a manner as to interfere as little as possible with the traditions and customs of the people."

Blackman (A. M.) The hieroglyph Δ a jar-sealing. (Man, Lond., 1911, XI, 19-20.) B. believes this hieroglyph to represent the mud-sealing of jars, still in use in Egypt. Numerous uninscribed mud-sealings were found in 1909-1910 among the rubbish cleared out of the northern temple at Halfa.

Blayney (T. L.) A journey in Morocco: "the land of the Moors." (Nat. Geogr. Mag., Wash., 1911, XXII, 750-776, 26 fgs., map.) Treats of history, the infidel city, the native types in the city, prison conditions, the arteries of traffic, caravans and camping, "powder play" in honor of guest, primitive agricultural methods, a city of Arabian Nights, the ancient glory of Fez, a Moorish wedding, the social ladder, Mequinez the beautiful, domestic life, etc.

Bosanquet (R. C.) Second interim report on the excavations at Meroë in Ethiopia. Part III. On the bronze portrait head. (Ann. Arch. & Anthropol., Liverpool, 1911, IV, 66-71, 5 pls.) Treats of "a bronze portrait-head in the finest style of Roman Imperial art," found at Meroë, 400 miles beyond the Roman frontier,—the head represents Augustus, and probably commemorates his visit to Egypt (perhaps he went as far as Syene) in B. C. 30.

Bouille (—) De l'usage du phallus au Tchad. (L'Anthropologie, Paris, 1911, XXII, 41-42.) Notes on the use of terra-cotta phallus by native women of the region about Lake Tchad (Wadai, Baghirmi, Burnu). These phalli were made by women potters (at Rabah an old soldier makes them for sale, to European collectors especially, but was taught their manufacture by a woman). The women never use them alone; one acts as husband for another.

Boyce (R.) The colonization of Africa. (J. Afric. Soc., Lond., 1911, X, 391-397.) Argues against the idea that "Africa is not a white man's country." B. believes that climate is

not insuperable and that questions of environment and tradition can be settled by earnest study of the people and real attempts to elevate them.

Burnier (T.) Le dieu des Zambéziens. (Bull. Soc. Neuchât. de Géogr., Neuchâtel, 1910, XX, 383-386, 2 fgs.) Brief account of *Nyambé*, the creator of the universe, God of the Zambesian natives, the prayer (or morning salutation) offered to him, the blessing of the mattocks, etc.

Capitan (L.) L'homme quaternaire ancien dans le centre de l'Afrique. (Rev. Anthropol., Paris, 1911, XXI, 229-232, 2 fgs.) Treats of typical stone implements of the quaternary type found by the explorer Bonnel de Mézières about 400 km. north of Timbuctoo,—they appear to be "absolutely identical" with French specimens whose quaternary age is undoubted. The relations of these prehistoric Africans with their European contemporaries is a question of great interest.

Chamberlain (A. F.) The contribution of the negro to human civilization. (J. of Race Develop., Worcester, Mass., 1911, I, 482-502.) Treats of the achievements of individual negroes and individuals possessing negro blood (Nefertari, Mutema, Amenhotep III, Nosseyeb, Sakanouye Tamuramaro, Ste. Georges, Lislet Geoffroy, Dumas, Pushkin, S. Gomez, etc.) in non-negro Europe, Asia, Africa, etc.; the debt of mankind to negro race as such in art, invention, industry, and achievements *en masse* (political and social organization, commerce, domesticated animals, art, musical instruments,—several possibly of negro origin, iron-smelting probably due to negro), and achievements of individual negroes taken from Africa in childhood and given European education (Miguel Kapranzine, Captein, Amo, Crowther; negroes at Universities of Spain and Portugal). Argues that the negro's contribution has been considerable and that he is capable of contributing much more in the future.

la Chard (L. W.) Ancient funeral rites of the pagan Gwari of Northern Nigeria. (Man, Lond., 1911, XI, 83-84.) Treats briefly of discovery, in November, 1907, of an old burial-

ground between Zungeru and Kuta, on the site of an old Gwari town, called Ajugbai, with numerous burial-jars, in which the dead were placed, with ornaments, weapons, offerings, etc. This urn-burial has been succeeded now by disposal of the dead after the Mohammedan fashion.

Claus (H.) *Die Wagogo. Ethnographische Skizze eines ostafrikanischen Bantustammes.* (Baessler Archiv, Lpzg. u. Berlin, 1911, Beih. II, 1-72, 103 fgs.) Treats of country and population (ca. 120,000); the *tembe* or dwellings (construction, plans; furniture; wall-paintings; transportable bed, etc.); domestic animals (cattle chief riches; asses; fowl; doves, recently introduced from the Wanyamwezi; dogs; honey-bees); agriculture (typical *Hackbau*; harvest-dance); food and its preparation (utensils; tobacco smoked and snuffed, rarely chewed); clothing and ornament (hair-dressing, ear-plugs and ear-rings, bracelets, etc.); weapons (spears, clubs, bow and arrow, shield; war-costume; war-dance; hunting of minor importance); industries, manufactures, etc. (iron-smith not specially honored; pottery altogether in hands of women; professional itinerant musicians; preparation of salt by women; trade chiefly exchange); counting, divisions of time, sign-language (numerals 1-10 on p. 38); hygiene, medicine, shamans, rain-makers, etc. (list of 20 plant remedies, pp. 39-40, treatment of disease); customs concerning birth, circumcision of youths and maidens (in bush; female operator for girls; new names after rite), marriage, burial; totemism (relations between groups of human beings and certain animals), religious ideas (god-creator, *mulungu*; spirits of dead continue life of earth); mythology and *märchen* (animal-fable, pp. 50-54); law criminal and civil; relationship (table, p. 59); inheritance; slavery; history of the Wagogo (pp. 61-65). Appended is a German-Wagogo and Wagogo-German vocabulary (pp. 66-72, four columns to the page).

Cowper (H. S.) On a series of small worked flints from Hilwan, Egypt. (Man, Lond., 1911, XI, 6-11, 3 fgs.) Treats of 204 specimens collected in

February, 1910, on the sandy plain just west of the modern town of Hilwan in Lower Egypt. They include right-handed and left-handed, right-handed shouldered and left-handed shouldered, and crescent-shaped flints. At this spot existed probably a "manufactory" of these little flints; the crescents were probably used for arming the edge of serrated weapons, or for pointing harpoons, fishing-spears, etc. These flints are not paleolithic.

Cummins (S. L.) Golo models and songs. (Ibid., 132-133, 3 fgs.) Notes on clay models of animals, from the Golo tribe near Waw in the Bahr-el-Ghazal; also English texts of four brief songs (Guma song, hunter's song, song of elephants, and rain song) recited to the author in 1902 by the chief of the tribe, one Guma, son of Kiango.

Curtis (C. D.) Objects of terra-cotta found at Cyrene. (Bull. Arch. Inst. Amer., Norwood, Mass., 1911, II, 166-167.) Brief notes on terra-cotta figurines (the majority of a good Greek period), "loom-weights" (77 of these were found), entire or fragmentary lamps (125, mainly of a Greek period). Hundreds of pin-heads of glass paste (originally gilded) were also found.

Dahomey songs. (Univ. of Penn. Mus. J., Phila., 1911, II, 54.) Gives English text of a war-song and a wedding-song (of which the phonograph records are in the Museum), obtained from Inquátwa, a young Yoruba.

Dahse (J.) Ein zweites Goldland Salomos. (Ztschr. f. Ethnol., Berlin, 1911, XLIII, 1-79, 7 fgs.) Argues for West Africa (Guinea) as "the second (besides Ophir) gold-land" of the voyagers of Solomon's sailors. Treats of the voyage to Tarshish and the products brought back; Guinea as a land of gold, history of the West African States; the knowledge of the ancients concerning West Africa; the relations of West Africa to the east and north; the displacements of population in West Africa; traces of ancient intercourse by sea (aggr-y-beads; *swastika* on gold-weights; astronomical evidences, figures on calabashes, etc.), other traces of Phœnician voy-

- ages to the west, inter-relations between West, East, and South Africa. According to Dr D., *Ophir* was located in South Africa (Zimbabwe), but *Uphas* (Jer. X. 9) was Guinea (West Africa),—"the Gold Coast."
- Dayrell** (E.) The incest tabu. (Man, Lond., 1911, XI, 153-154.) Author's experience of 9 years in the Ikrom district of the eastern province of Northern Nigeria leads him to believe that "incest is extremely rare; it is entirely against native custom, and in the olden days would have been punished by death." Examples are given.
- Eichhorn** (A.) Beiträge zur Kenntnis der Waschambaa (nach hinterlassenen Aufzeichnungen von A. Karasek). I. (Baessler Archiv, Lpzg., u. Berlin, 1911, I, 155-222, 27 figs.) Treats of houses and villages and their arrangement (real Wajamba type of house is bee-hive hut; villages average 25 huts), construction, etc.; food, ornament, and hair-dressing (women and girls very fond of ornament; old Wajamba hip-bands very interesting); artificial deformations (painting now in vogue only on two festival occasions; burning of *kanzu* figures into skin, adopted from coast tribes; tattooing rare; ear-piercing; deformation of teeth; deformation of nose among women only); clothing (now resembles that of the coast peoples); agriculture (felling of trees and burning of underbrush work of men; hoeing of fields done by men and women; besides work in general plantation, woman can cultivate her own special plot, the product of which belongs to her alone; list of plants cultivated, etc., pp. 176-180); tobacco, music (mouth-drum disappeared; musical bow, etc.); means of transportation (bridges formerly unknown); marriage, position of woman, children (looser ideas of marriage coming with civilization; white men despised by women on account of color and because uncircumcised, when European); birth and death (declining birth-rate attributed by natives to coming of Europeans and to failure to observe strictly old religious taboos, etc.; suicide rare); circumcision-festival (author gives details as observed by him); belief in spirits, "magic," etc.; medicine ("doctor" is generally shaman also); diseases and therapy (list given with "cures," pp. 198-207); time-reckoning, astronomy, etc. (great rainy period serves to set off seasons). At pages 210-222 are given German texts only of 26 brief tales, legends, fables, etc.
- Ellis** (G. W.) Political institutions in Liberia. (Amer. Pol. Sci. Rev., Concord, N. H., 1911, v, 213-223.) Historical items and personal sketches of prominent Liberians in politics.
- Friedrichsen** (F.) Mitteilungen über Forschungen in Zansibar. (Z. f. Ethnol., Berlin, 1910, XLII, 954-955.) F. maintains that the minarets of the Mahometan mosques, in E. Africa, at least, and the peculiar ornaments on the graves of the South Arabians and their *métis* descendants, are simply more or less conventionalized sacred phallic symbols. Some of the Zanzibar grave-ornaments are closely related to some on the ruins of Zimbabwe in Mashona land.
- Garstang** (J.) Second interim report on the excavations at Meroë in Ethiopia. Part I. Excavations. (Ann. Arch. & Anthropol., Liverpool, 1911, IV, 45-52, 6 pls.) Treats of exploration of the Temple of Amon, the Temple of the Sun, the royal city (walls, palaces), and other buildings. Among the finds were a remarkable Greek cameo (ca. 300 B. C.), Meroitic cursive inscription on stone tablet (with low reliefs), obelisk with one of the longest Ethiopian texts yet discovered, wall-scenes, Egyptian objects of various periods, a bronze Roman portrait, three Meroitic statuettes. Some of the temples seem to have been built on the refuse-mounds of iron-smelting. See Bosanquet, R. C.
- Gordon** (G. B.) Philae, the forsaken. (U. of Penn. Mus. J., Phila., 1911, II, 5-10, 7 figs.) Treats of the island of Philae and its temples whose courts are now flooded from December to April each year, as a result of the great barrage two miles below it. The proposed increase in the height of the dam will, with a full reservoir, completely submerge the temples.
- Guébbard** (P.) Notes contributives à l'étude de la religion, des mœurs et

- des coutumes des Robo du cercle de Koury, Soudan français. (Rev. d'Ethnogr. et de Sociol., Paris, 1911, II, 125-145, 6 pls.) Treats of religion (cult of deity of generation, cult of *gris-gris*, cult of ancestors,—djinns, etc.), rites and ceremonies (*lobbey* or chief priest, sacrifices), political and social *régime* (village, family), internal constitution of family (house-chief, houses, reception of strangers), society and customs (rights of chief, position and rôle of women and children, parasitic classes), individual and social life (birth, pregnancy, circumcision,—girls only, tattooing of both sexes, marriage by capture and regular, chastity, treatment of adulterer, dowry, divorce, polygamy), death and burial, property and inheritance, judiciary system (thefts rare; crime and punishment), racial character, etc. Pages 142-144 contain notes on the Souhouni, Samono or Samorho, who are not really Robos. The author is optimistic as to the future of the Robos, who are sympathetic, industrious, and capable of advancement.
- Guérin (P.) La noix de kola. (Rev. Scientif., Paris, 1911, I, 257-262.) Treats of the *kola*-nut in Africa, etc., its use by the natives (remedy for diarrhoea, fever, etc.; aphrodisiac for young and old; used as gifts, amulets, fetish-offerings, ordeals; symbol of friendship and love; in some regions freemen only allowed to eat *kola*-nuts; various uses in religious and superstitious ceremonies; in some parts trees are property of chief, in others individually inherited; planted to commemorate birth of child or other important family event). Based on A. Chevalier and E. Perrot's work, *Les Kolatiers et la noix de Kola* (Paris, 1911).
- Gutmann (B.) Zur Psychologie des Dschaggarätsels. (Z. f. Ethnol., Berlin, 1911, XLIII, 522-540.) Discusses the psychology of the riddles of the Wajagga negroes. Riddle as secret discloser of things; basal knowledge of man found first expression in riddle, peculiarities of environment also; imagination and jest; contrast-riddles; an early critic as well as former of human conceptions of the world; religious riddles, —little influence of religion upon Wajagga riddles; periphrastic and kindred riddles, avoidance of real names, etc., of animals and natural phenomena; derisive riddles, political riddles; onomatopoeic and related riddles; jesting riddles; riddles of comparison; riddles as preservers of old words, etc., and as originators of new ones; proverbs in riddles,—relation of riddle and proverb, etc. The riddle is a valuable means of investigating the folk-soul and of the best traditional documents for the intellectual history of mankind.
- Harris (N. D.) French colonial expansion in West Africa, the Soudan, and the Sahara. (Amer. Pol. Sci. Rev., Concord, N. H., 1911, V, 353-373.) Sketches the course of events by which "the great Sahara has been conquered and French North, West, and Central Africa permanently united. The Eastern Sahara and the Bornu-Wadai regions remain under military rule.
- Hobley (C. W.) Kikuyu customs and beliefs. Thahu and its connection with circumcision rites. (J. R. Anthr. Inst., Lond., 1910, XL, 428-452, 3 pls.) Gives, on pages 430-439, a list of 62 *thahu* (a condition into which a person is supposed to fall if he or she accidentally becomes the victim of certain circumstances, or intentionally performs certain acts which carry with them a kind of ill-luck or curse). If the *thahu* (the person becomes emaciated, breaks out into eruptions, or boils, etc.), said to have been produced by the *ngoma* or spirits of departed ancestors, is not removed, the person will probably die. The ceremony of the *kuchiaruo ringi* (to be born again), which prepares the child for circumcision, is described (pp. 440-442) and the circumcision ceremonial itself on pages 442-443. The Masai fashion of these ceremonies is also described with some detail. On pages 447-449 is described purification by a medicine-man; and on pages 449-452 two versions of the generations of the A-kikuyu.
- Hofmayr (P. W.) Religion der Schiluk. (Anthropos, St. Gabriel-Mödling bei Wien, 1911, VI, 120-131, 1 pl.) Treats of "the great spirit," Čuok,

his nature, etc. (he is creator, but not worshiped to a large extent); ancestor-cult (*Nyang* is the first Shilluk king, a very beneficent ancestor; animal taboos and offerings; text of prayer, p. 126), spirits of dead, life in the other world; myths and legends (creation of man by *Čuok*; why the Shilluk are black and subordinated to the whites).

Hollis (A. C.) A note on the Masai system of relationship and other matters connected therewith. (J. R. Anthr. Inst., Lond., 1910, XL, 473-482.) Gives (pp. 473-477) a list, with explanatory remarks, of the principal terms of relationship, when spoken of indirectly and when addressed directly. Sociological data as to marriage, sexual intercourse, mother-in-law taboo, etc. (pp. 477-481). A chart of the system is appended.

Holt (G. E.) The two great Moorish religious dances. (Nat. Geogr. Mag., Wash., 1911, XXII, 777-785, 5 fgs.) Describes briefly the annual dances of the Aisawa and Hamadsha sects, the former the followers of Mohammed Ben Aisa, a saint who lived about two centuries ago, and the latter (less numerous and influential), the followers of Sidi Ali Bel Hamdush, a saint of later date.

Hoppin (J. C.) Vases and vase fragments found at Cyrene. (Bull. Arch. Inst. Amer., Norwood, Mass., 1911, II, 164-165.) At Cyrene Proto-Corinthian, Corinthian, and Rhodian wares were imported and "the real Cyrenaic probably followed suit as a local industry." A large number of fragments of Arretine ware were found. In a foot-note R. Norton expresses the opinion that "besides importing the true Arretine ware, the potters of Cyrene made vases of the same type and of equal beauty."

Hough (W.) The Hoffman Philip Abyssinian Collection. (Proc. U. S. Nat. Mus., Wash., 1911, XL, 265-276, 23 pls.) Catalogues, with brief description, and figures: Basketry (embroidered hat, coiled millet-basket), metal work (embossed shield, miter, necklaces, crosses, bracelets, scabbard mounting, tweezer-case, ornamental bands, food-strainer, bell,—all of silver), drinking cup of horn,

oil-cup of wood, pictorial art (trip-tych; religious painting on coarse muslin representing coronation of Mary; painted scroll with Biblical story of rich man and Lazarus; painting of Menelek; scroll painting of battle of Adowa, 1896; pictures on brass); theological treatise in Amharic script on parchment; mantle of tanned goatskin and lion's mane head-dress; ornaments (necklet, armlets, anklet, earring); religious mask; spoon; head-rest; lasso and horse-bell; specimens of coinage, etc. Collection (probably first Abyssinian to be brought to America) was made by U. S. Minister Philip in Abyssinia in 1909.

Hurel (E.) Religion et vie domestique des Bakerewe. (Anthropos, St. Gabriel-Mödling bei Wien, 1911, VI, 62-94, 276-301, map.) Notes on the religion, family life, etc., of the natives of Ukerewe, the largest island in L. Victoria Nyanza. Habitat, population (Mukwaya first occupants, most numerous; Musese, ruling class; Mururi, paria, slave class), history (oral tradition), government (absolute monarchy); religion (amulets and talismans comparatively few; superstitions, beliefs relating to nameless deities; spirits; known spirits; myth of Namuhanga, creator and sun-deity, pp. 79-81, soul-lore); shamans and sorcerers (for the fields, against birds and locusts, rain-makers, "doctors," soothsayers).—*bafumu*, sorcerers, *balogi*, practitioners of black magic, *musiba*, "priests"; sacrifices and offerings, sacred dances; morals (polygamy general, but tending to disappear); dwellings (two distinct types) and architecture; food, cookery, meals (two meals, about noon and about 7 P. M.); dress (boys up to 8-10 years naked); family and social organization (paternal; adoption not common; blood-pact common; slavery); marriage (account of wooing, etc., pp. 288-290, wedding 290-292; divorce); child-birth, education (physical only), old age and death, burial (account of royal funeral, pp. 299-301).

Jenks (A. E.) Bulu knowledge of the gorilla and chimpanzee. (Amer. Anthrop., Lancaster, Pa., 1911, N. S. XIII, 56-64.)

Johnson (F. E.) *Tunis of to-day.* (Nat. Geogr. Mag., Wash., 1911, XXII, 723-749, 24 fgs.) Treats of houses, market-scenes, food, street-scenes and industrial activities, Jewish wedding customs, etc.

— The mole-men: an account of the troglodytes of southern Tunisia. (Ibid., 787-846, 60 fgs.) Account of visit in 1911 to the cave-city of Matmata and environs in Tunisia 45 km. to the south of Gabes. Notes on the home of Sheik Ferdjani, status of woman, domestic life, food, etc. The illustrations (Arab types, fair-scenes, bread-making and selling, pottery-making, camels, domestic scenes, gaming, market-life, street-scenes, washing, cemetery, school, cave-dwellings of various sorts, etc.) are of ethnologic value.

Joyeux (—) *La magie musicale chez les peuplades africaines.* (Revue Musicale, Paris, 1911, XI, 103-104.) Letter from Kouroussa, French Guinea, on music and magic as practices by hunters (ceremonies on death of hunter, etc.). A song is sung to counteract the effect of the souls of animals slain upon the soul of the dead hunter.

Junod (H. A.) *Deux cas de possession chez les Ba-Ronga.* (Bull. Soc. Neuchât. de Géogr., Neuchâtel, 1911, XX, 387-402.) Discusses in detail two cases of "possession" (*psikouembo*, "folie des dieux"), both women, among the Baronga of Lourenço Marques, S. E. Africa. One of the cases was provoked, the other spontaneous. Both women are now good Christians. "Possession" is more frequent with women among the Baronga.

Keith (A.) On certain physical characters of the Negroes of the Congo Free State and Nigeria. (J. R. Anthropol. Inst., Lond., 1911, XLI, 40-71, 4 pls.) Treats with details of measurements of the stature of certain tribes (Bushongo 18 males, 2 females; Basoko 11 m., 4 f.; Sango 10 m.; 24 males from various regions, Azande, Momuu, Bangelime, Bangala, Gombe, Bula, Bapoto, etc.; and 12 females, Gombe, Bapoto, Mongwi, etc.), and 86 crania of Batela of the region between the sources of the Sankuru and Lomami rivers,—data

and skulls obtained by M. E. Torday; also measurements (by Mr P. A. Talbot) of certain tribes of the Oban district of British Nigeria (Ekoi 23 m., 1 f.; Korawp 13 m., 4 f.; Kabila 10 m.; Calabar 2 m.; Uyanga 4 m.; 3 m. from the west further beyond the Kalile) and 5 crania (3 m., 2 f.) from the Ekoi country; likewise 5 crania obtained from the delta of the Niger,—at Ogoni, near Bonny. Mr Torday's material is chiefly typical Bantu, Mr Corner's non-Bantu, while Mr Talbot's comes from a region on the border-line between the Sudanese and Bantu-speaking negroes. The Nigerian tribes are taller than the Congolese (except that the Korawp belong in the shorter group, while the Congolese Bushongo go with the taller). The finger-reach of the Korawp is 7% greater than the stature. In stature, span, face, head, pigmentation, and nose the Ekoi and Kabila approach the negro average; the Bushongo resemble the Niamniam rather than the Korawp; the Batetela and the Basoko are types of Congolese contrasting in head-form with the laterally compressed Nigerian type. The influence of Arab blood in the equatorial part of Africa has probably been exaggerated.

Lang (H.) News of the Congo expedition. (Amer. Museum J., N. Y., 1911, XI, 191.) Note on Mangbetu. The anthropological collection now numbers 1,400 specimens, representing "practically the entire territory inhabited by the Mangbetu and tribes intimately mingled with them."

Lowie (R. H.) Industry and art of the Negro race. (Ibid., 12-19, 8 fgs.) Notes on the Museum's collection in the African Hall: native metallurgy, musical instruments, decorative woodwork and pile cloth,—the Kasai patterns "occasionally rise to classic beauty of composition." The iron-work "is at times equally impressive by the almost incredible virtuosity of its ornamentation."

McCoy (L. H.) The riddle of the Pyramid. (Amer. Antiq., Benton Harbor, Mich., 1911, XXXIII, 123-134, 1 fg.) Argues that "the arrangement and construction symbolizes the destiny of man and his ultimate end," and that "the Egyptian

- endeavored to duplicate the diagrammatical arrangement which he saw among the stars."
- Macfie** (J. W. S.) A Bassa-Komo burial. (Man, Lond., 1911, xi, 185-187.) Account of burial of the king's father as witnessed at Dekina, Northern Nigeria, in January 1911 (digging grave, honoring the dead, dressing the corpse, sacrifice, funeral-wand, etc.).
- Maes** (J.) Notes sur quelques objets des Pygmées-Wambuti. (Anthropos, St. Gabriel-Mödling bei Wien, 1911, vi, 132-135, 1 pl.) Brief descriptions of bows and arrows, quiver, bracelets, belts, necklace, paint-block, axe, honey-box, basket, boxes, mortar, musical instrument (*mandumba*),—all specimens are in the Musée du Congo,—from the Wambuti pigmies of the Mawambi forests.
- Notes sur le matériel du féticheur Baluba. (Ibid., 181-185, 12 figs.) Figures and describes the paraphernalia (wooden figurine, bâton, bracelets, belts, medicine-boxes, amulets, sachet, knife, gourd, shells, cauterizer, flints, spear-head, cap, antelope-skin, etc.) of a Baluba "medicine man."
- Kése et Tambue fétiches des Wazimba. (Ibid., 18-19, 4 figs.) Treats of two wooden fetishes in female form and one in male form from the Wazimba or Bango-Bango, a warlike, independant tribe of the Lualaba region. Four of these fetishes are now in the Congo Museum at Tiewueren. They are sacrificed to in cases of illness, etc.
- Mascart** (J.) L'Archipel Canarien. (Rev. Scientif., Paris, 1911, 225-232.) Contains some notes on the ancient history (pp. 225-226), the primitive inhabitants (pp. 227-228), etc. To the literature cited should be added the article of A. C. Cook in *Amer. Anthropol.*, 1900, N. S., 2, 451-493.
- Neligan** (C. W.) Description of Kijesu ceremony among the Akamba, Tiva River, East Africa. (Man, Lond., 1911, xi, 49, 1 pl.) Brief account of exorcism of a woman who had a fit on account of seeing author with helmet on.
- Newberry** (P. E.) The inscribed tombs of Ekhumim. (Ann. Arch. and Anthr., Liverpool, 1911, iv, 99-120.) Describes, with reproduction of inscriptions, etc., 28 tombs of the 6th to the 12th dynasties, and one untouched burial with three painted wood coffins of the Old Kingdom, discovered at Ekhumim, the city of the deity Min, 310 miles south of Cairo.
- Nkonjera** (A.) History of the Kaman-ga tribe of Lake Nyasa. A native account. (J. Afric. Soc., Lond., 1911, x, 331-341.) Treats of tribal divisions, and traditions, chiefs and their succession, wars and risings, etc., down to 1887.
- Norton** (R.) From Bengazi to Cyrene. (Bull. Arch. Inst. of Amer., Wash., 1911, ii, 57-57, 6 pls.) Treats of "experiences of the preliminary reconnaissance," in May and June, 1910. Bargaining with Arabs, camping and traveling, ruins, etc.
- The ruins at Messa. (Ibid., 135-137, 9 pls.) Treats of ruins (buildings and traces, Ionic and rock-cut tombs, ancient road, etc.) at Messa, some hours southeast of Cyrene, discovered by the author in May, 1910. Messa was a Greek city and inhabited as early as the fourth century B. C.
- The excavations at Cyrene: First campaign, 1910-11. (Ibid., 141-163, 35 pls.) Describes excavations (Acropolis, apse building, colonnade buildings, garden, necropolis), etc. Among the principal finds are: Pottery, terra cotta figurines and tiles, lamps, coins, half-length statues of women, marble statues, torso of Artemis, portrait-bust life-size (of first century A. D.), head of Athena with Corinthian helmet. The necropolis of Cyrene is of great extent and has an earlier and a later section.
- Offord** (J.) Discovery of Byzantine papyri in Egypt. (Amer. Antiq., Benton Harbor, Mich., 1911, xxxiii, 148-150.) Treats of the record of a governor of the Thebaid, Flavios Marianos, on a papyrus, obtained at Kom Ishgaou (ancient Aphrodite), dating from the 6th century, A. D.
- Ouzilleau** (—) Notes sur la langue des pygmées de la Sanga, suivies de vocabulaires. (Rev. d'Ethnogr. et de Sociol., Paris, 1911, ii, 75-92, 5 pls.) Treats of the distribution of the pigmies and their languages, etc., with

résumés of opinions of various authorities (Stanley, Casati, Leroy, Schmidt, van der Burgt, Johnston, etc.). Vocabularies of some 90 words are given (pp. 80-92) in 10 pigmy dialects (Mbimu; Baya Buri of Bayanga, Upper Kadeï; Gundi, near Bakoto, below Nola on the Upper Sanga; Bongiri or Bukongo of Niémélé, Upper Sanga; Pandé, Upper Sanga; Niumba and Salo, Upper Sanga; Bakota and Loko; Lower Lobaye; Gundi, on the Bodingué, Upper Sanga; Bomassa, Central Sanga; Modjanbo, from Betu on the Central Ubangi; Banziri from Baganda on the Kémo, in the Ubangi region) in comparison with standard negrillo. According to Dr O. the negrillos observed by him do not use the languages of the peoples surrounding them. The languages of the negrillos in question are of two distinct sorts. One spoken by the tribes of the Lower Sanga, the Ngoko, the Mbimu, and the Kadeï, is evidently Bantu; the other, in use among the peoples to the east of the Sanga, the Bukongo country, Lobay and Ubangi, seems to belong to an independent stock, possibly the original language of the negrillos,—but it is difficult to find any traces of it in the dialects of the Bantu-speaking negrillos. The illustrations are of pigmy types, etc.

Papillault (G.) *Anthropométrie comparée des nègres africains et des français des deux sexes.* (Rev. Anthropol., Paris, 1911, XXI, 321-344, 5 fgs.) Gives details of measurements of 26 men and 26 women of the Mundas (of Léré on the banks of the Mayo-mpe, a tributary of the Benué), made by Brussaux, in comparison with the same for modern French people. Stature, neck, length of trunk, legs and arms, head and face measurements, etc., are considered. As compared with the man of her race, the negress is not so tall as is the white woman relatively to the white man; the racial characters of the trunk are marked; the legs are longer in the negro than in the white man,—the arms also. In the "intermembral index," the negro is farther removed from the anthropoids and from the infantile type than is the white

man; the Mundas are all quite dolichocephalic and platyrrhine.

Parkinson (J.) A note on the social organization of the peoples of the Western Gold Coast. (Man, Lond., 1911, XI, 2-3.) Treats of the "twelve families" of the Tshi-speaking peoples and their relationship to one another, with respect to the natives of Appolonia. Each family or totem has its holiday or feast day. The week had 12 days, the month 60. Children are named from the day on which they were born (several born on Friday, are called Friday 1, Friday 2, etc.). The maximum number of children allowed is 9. In ordinary exogamous marriage, children "belong to the mother's totem, but in cases of civil war they act in conjunction with their father's tribe."

Petrie (W. M. F.) Roman portraits in Egypt. (Ibid., 145-147, 1 pl.) Treats of canvas portraits of the dead, hung in a frame on the wall or over the face of the dead. The four portraits figured represent a young Egyptian with some Sudani ancestry; an old lady of the North Mediterranean type; a Syro-Egyptian; and a man probably of Moresque-Spanish ancestry.

— The excavation of Memphis. (Rec. of Past, Wash., 1911, x, 3-14, 16 fgs.) Gives account of explorations of Palace of Apries and Temple of Ptah, with plans, etc. On the blocks of the great gateway are depicted scenes relating to the installation of the crown prince. Among the smaller finds were part of the fittings of the royal palanquin. Also remains from Persian times (steel scale armor, seals and labels, etc.). Remains of two quartzite sandstone sanctuaries of Amenhotep III and Amasis were found. From the foreign quarter were obtained many terra-cotta heads (Iberian, Carian, Hebrew, Kurd). Excavations have also been carried on at Thebes, Meydum, etc.

Pösch (R.) Zur Simbábye-Frage. (Mitt. d. k.-k. Geogr. Ges. in Wien, 1911, LIV, 432-452, 4 pls., 1 fg.) Résumés, with bibliography of 46 titles, the facts and theories concerning the famous Zimbabwe ruins in Rhodesia. P. concludes that it has not been

proved that the remains represent anything older than the European Middle Ages, or anything beyond the capacity of the African aborigines. There is no evidence of the presence of Egyptians, Phenicians, Sabceans, etc.; nor was gold-mining here carried on beyond the ability of the negro.

Raum (J.) Die Religion der Landschaft Moschi am Kilimandjaro. (Arch. f. Religsw., Lpzg., 1911, XIV, 159-211.) Gives, from the Ms. of Yohane Msando, a Christian Tshagga teacher, valuable details on the religion and mythology of the natives of the Moshi country (Tshagga) about Kilimandjaro: Spirits (ancestral worshiped and prayed to; ancestor-cult here is the family-society continued beyond the grave; the abode of spirits is underground; there are "spirits of the right side" and "spirits of the left side," the latter feared less); burial and disposal of the dead, curse of the dying; ideas about God (*Ruwa*),—probably more celestial than solar on the whole, and prayers to him; medicine-men (ordinary "magic" and evil "magic") and their activities.

Regnault (M.) Les Babenga. Negrides de la Sanga. (L'Anthropologie, Paris, 1911, XXII, 261-288, map, 1 pl., 6 fgs.) Treats of habitat and ethnic divisions, physical characters (av. stature 1,520 mm., lowest 1,350 mm.; prognathism not very marked; pilosity not exceeding limit of white races; nose characteristic feature of Babenga physiognomy; arms and legs well-muscled; beard frequent; skin yellowish; "race-odor" marked); mutilations (teeth-filing, cicatricial tattooing, circumcision); material life (clothing, dwellings and camps,—typical sort now disappearing, rectangular huts succeeding the round; fire and fire-making; food,—essentially hunters,—honey and gathered fruits, roots, etc., no agriculture, tobacco and palm-wine obtained from neighbors; anthropophagy probable; utensils; hunt of elephant, pp. 275-279; weapons; music and dance); domestic life (woman and marriage; monogamy common but not exclusively in vogue; birth, death; social life not very characteristic; ivory-

trade; family is social unit; *palavers*), etc.

Rütimeyer (L.) Über einige altertümliche afrikanische Waffen und Geräte und deren Beziehungen zur Prähistorie. (Z. f. Ethnol., Berlin, 1911, XLIII, 240-260, 16 fgs.) Treats of African spears with bone points (rare specimens from the Jambo on the Gelo, a tributary of the Sobat in S. W. Abyssinia); lances with antelope-horn points from the Shilluk, etc. (cf. Herodotus' mention of the stone-pointed arrows of the Ethiopians); throwing-boards from Darfur and the Kongo; throwing-clubs from Nigeria and North Africa and boomerangs from Darfur, etc.; stone clubs of the Ja-Luo of Kavirondo on the Victoria Nyanza; wooden swords of the Issenghe; small wooden shields from Senegambia; stone pestles from the Sahara; fossil sea-urchins as amulets (so used in the region of Kano) (cf. similar objects from prehistoric Europe); soap-stone vessels of the Ababde (cf. soap-stone tobacco-pipes of the same tribes). According to R. the objects discussed offer clear *rapprochement* with the art and industries of prehistoric man, and prove for Africa not merely a stone age but other developments corresponding to those of man in prehistoric Europe, etc. Some of the objects (bone- and horn-pointed spears, parry-shields, wooden throwing-clubs and boomerangs) are, R. thinks, partly new members in the chains linking together the Nigritic culture of Africa with ancient Australian culture. The oldest population of North Africa was probably negroid. The implements and weapons of the sort here described represent a primitive African culture, the "Nigritic" of Frobenius, corresponding to the so-called "boomerang-culture" of Australia and the culture of the primitive Tasmanians. According to Foy, relics of this Nigritic culture occur especially in a belt of country stretching from the Blue Nile through the Congo region to N. Africa.

Sayce (A. H.) Second interim report on the excavations at Meroë. Part II. The historical results. (Ann. Arch. & Anthropol., Liverpool, 1911, IV, 53-65.) According to Dr S., "the Mero-

itic civilization seems to have been imposed from without upon a native neolithic population." The city did not become the seat of civilization or government until the ninth century B. C. A marked influence of Greek culture occurs from the age of Ergamenes onward; this was succeeded in turn by Latin influence. After the partial destruction of Meroë in the first century A. D., "the court and priesthood themselves became more African,"—the kings married negroes and their offspring grew more and more negroid. When Meroë fell, in the fourth century, A. D., "it had practically ceased to be Ethiopian (Hamitic)." See Garstang (J.).

Schenk (A.) A propos des Fang. (Bull. Soc. Neuchât. de Géogr., Neuchâtel, 1910, XX, 412-415, 1 pl.) Treats of the figurine surmounting the box containing the skulls of ancestors among the Fang or Pahouin of W. Africa. This fetish-box is called *biéti*,—a specimen is now in the Museum of Natural History at Nîmes.

Seligmann (C. G.) An Avungura drum. (Man, Lond., 1911, XI, 17, 1 pl.) Note on a wooden drum in the form of a bullock or cow, taken from Yambio, the most powerful chief of the Avungura (Azande) during a punitive expedition in 1905, and now in the museum of Gordon College at Khartum.

— The physical characters of the Nuba of Kordofan. (J. R. Anthr. Inst., Lond., 1910, XL, 505-524, 5 pls., map.) Gives observations and measurements, made in the spring of 1910, in southern Kordofan, of 32 males and 11 females from Lafofa and Eliri, 3 men from Jebel Talodi, 8 from Jebel Lumun, and 7 from the hills of Tira Akhdar. The Nuba are not a pure race, as the wide range of variation (e. g. cephalic and nasal indices) show. Mesaticephaly predominates. The average stature of 32 men is 1,730 mm., of 11 women 1,570; average cephalic index 76.42 and 76.3.

— and Murray (M. A.) Note upon an early Egyptian standard. (Man, Lond., 1911, XI, 165-171, 15 fgs.) Treats of hitherto unexplained standard occurring upon the great slate palette of King Narmer found at

Hierakonpolis in Upper Egypt. The authors believe that the irregularly circular, slightly bilobed object, from which depends a streamer, represents the placenta and umbilical cord,—the placenta "plays a prominent part in the cult ceremonies of the Baganda." The name of the standard ("the *khennu* of the king") can be translated "the inside thing of the king."

— Note on the "Sa" sign. (Ibid., 113-117, 1 pl., 2 fgs.) Discusses changes and developments of form; also meaning of word *sa*. Originally the *sa* sign did represent a bundle of papyrus-stalks (cf. the bronze amulet of El Kab), but later on "it came to be regarded as representing the uterus and its appendages," as indicated, e. g., by the wing-like additions on each side of the main portion of the sign.

Seyffert (C.) Die Ausrüstung eines Elefantenjägers der Baia nebst einigen Bemerkungen über die Elefantenjagd in Kamerun. (Ztschr. f. Ethnol., Berlin, 1911, XLIII, 91-110, 3 pls.) Describes, with list of articles 1-44 now in the Royal Ethnographic Museum of Dresden, the equipment of an elephant-hunter among the Baia, a people of French Congo (partly also in German territory, on the Kadeï), with some notes on elephant-hunting in the Cameroons. The equipment includes caps, powder-flask, flutes, bells, fly-brush, rings for arms and legs, purses, pouches, etc., strings of amulets and various other objects, leather thongs and strings of various sorts, knife-sheath, etc. Transformation of men into elephants is believed in. In the Ossidinge district the elephant, though a "totem-animal," is hunted. See Stumme (H.).

Sladden (A. F. S.) Medical work at Cyrene, 1910-11. (Bull. Arch. Inst. Amer., Norwood, Mass., 1911, II, 168-176.) Contains notes on diseases and treatment among Arabs, etc. Cauterization, seton, treatment of fractured limbs, headache-remedy, tattooing. Among diseases noted as common are: ophthalmia, syphilis, tuberculosis, carcinoma. Rare or infrequent are: hernia, varicose veins.

Some East African tribes. (Univ. of Penn. Mus. J., Phila., 1911, II, 43-53, 9 fgs.) Notes on the Akikuyu

(also Anika and Masai), dress and ornament, iron-working, religion and shamanism, etc. Collections from these tribes have been recently added to the Museum.

Spieß (C.) Zum Kultus und Zauberglauben der Evheer, Togo. (Baessler-Archiv, Lpzg. u. Berlin, 1911, 1, 223-226, 277-279, 8 fgs.) Treats briefly of the *legba*-cult (spirit-fetish, human-like figures of clay, male and female), *aklama* (small, human-like wooden figures of protective spirits), "magic" for pregnant women, and the sacred *asadagli* stones among the Ewe of Togo-land; the *dogbeme-sikpo* "house for the wife a man had before he came into this world"—a little "house" erected in the hut, to which sacrifices, etc., are offered (it is very closely connected with the sexual life); the protective fetish *gbone* the lower jawbone magic of *gläkpédzo*, etc.

Stannus (H. S.) Notes on some tribes of British Central Africa. (J. R. Anthr. Inst., Lond., 1910, XL, 285-335, 2 pls., 15 fgs.) Treats of the natives (Anyanja, etc.) of the southern end of L. Nyasa, particularly those near Ft. Johnston. Physical characteristics in general, senses, etc.; astronomy; enumeration; crimes, etc. (homicide and suicide offenses; all cases heard by chiefs and head-men; punishments practically all meant payments); customs, salutations, etc.; disease (names, treatment, medicines); circumcision and initiation ceremonies (pp. 296-298; circumcision was not practiced by Anyanja); morals; religion (*mzimu*, or spirit, and spirit-lore); witchcraft (*mphiti*, etc.); ordeals; superstitions; clans (and clan-names); marriage and status and activities of women (child-birth, menstruation, treatment of infants); death and burial ceremonies; artificial deformations (lip-stick; some nose piercing; ear-piercing; teeth-filing; cicatrization by both sexes; tattooing); ornaments (hair-dress, beads, necklaces, charms, amulets, bracelets, belts; use of pigments on body very limited); clothing (varies from nothing to European garments); food (maize and rice staple); beer from maize or millet; list of food-stuffs, p. 322; food-

taboos; tobacco-smoking (introduced from coast); agriculture; cattle; hunting and fishing; fire (simple fire-drill); habitations and house-life; pottery and basketry (varieties listed); leather; dyeing (practically none); painting (outside decoration of houses of recent origin); stone-work (no implements of stone except for grinding certain grains); metallurgy (iron; copper only in the north, Wahenga); boats (dug-out without outriggers); swimming (not taught; most can swim, but not fast or far); games (several games of the *mancala* type; no dice games; children's games); dances (list of 24, pp. 333-335).

Staudinger (P.) Funde und Abbildungen von Felszeichnungen aus den alten Goldgebieten von Portugiesisch-Südost-Afrika. (Ztschr. f. Ethnol., Berlin, 1911, XLIII, 140-146, 8 fgs.) Treats of pictographs at Chikoloni in the Manu district of Portuguese Southeast Africa and at Katzombo in the Chipeta country. These pictographs are not "inscriptions," as some have supposed, although some others found by Wiese and Schlicht may be so in part. Among the objects found under the "inscription-rocks," or in the old mines were stone hammers and pounding tools, clay "mould" (?), fragments of pottery, iron arrow-head, bronze or copper beads and hooks, gold objects, etc. According to Capt. Spring, through whom the specimens were obtained, the limits of the old "gold country" extend beyond the Zambesi to the north. To the northeast in Katanga copper was worked by the natives from time immemorial; to the south, in the Transvaal, iron and copper, and seemingly also tin.

— Bruchstück eines west-afrikanischen Riesensteinbeiles. (Ibid., 146-147.) Note on fragment of huge stone axe from Aburi in West Africa. Such implements are used for working soft woods, such, e. g., as *Eriodendron anfractuosum*. They have now been reported from several parts of West Africa.

— Zinnschmelzen afrikanischer Eingeborener. (Ibid., 147-153, 5 fgs.) Treats of tin-smelting of the African natives in Rinuei (or Riuwei) Baut-

schis in the Province of Northern Nigeria, after information by Director Visscher. This native industry, now on the point of being driven out by the manufactures of the whites, has existed for centuries, as Dapper (whose book appeared 240 years ago) already records it. The Kiruei people came from Kano and are Hausas. In early days the Hausa tin-smelters exported their product as far as Tripoli and the Nile, but it is doubtful if any ever went outside of Africa. Tin-smelting belongs perhaps with the newly discovered "West African culture." The method of smelting is described.

Stumme (H.) Wortlaut und Übersetzung zweier augenscheinlich zum Einlegen in Amulettkapseln bestimmter Schriftstücke in arabischer Sprache, im Maghreb von Algerien, Tunesien oder Tripolitanern geschrieben. (Ibid., 111-113, 2 pls.) Text and translation of two Arabic amulet-letters carried in pouches by negro elephant-hunters among the Baia. See: Seyffert (C.).

Sturck (B.) Bemerkungen über die "Mbandwa" des Zwischenseengebiets. (Ibid., 516-521.) Discusses the etymology and meaning of *mbandwa*, the spirit *kisiba*, the "migration of spirits," etc. See Vix (Dr.).

Tate (H. R.) Further notes on the southern Gikuyu of British East Africa. (J. Afric. Soc., Lond., 1911, x, 285-297, 2 pls.) Treats of circumcision (list of *marika* or circumcision ages from 1909 to that remembered by the oldest Gikuyu, with their meanings, etc.); the generations of the Gikuyu; stages of male and female life; terms of relationship (list pp. 291-293), native councils, procedure, etc.; land tenure.

Todd (J. L.) and Wolbach (G. B.) Stone circles in the Gambia. (Man, Lond., 1911, xi, 161-164, 1 pl., 1 fig.) Notes on circles at various localities on the Gambia River, with account of finds (pottery, human skulls and bones, copper bracelets, spear-heads, etc.) made in excavating a stone circle $1\frac{1}{4}$ miles north of the Gambia River opposite the station at McCarthy's Island. The human remains seem to belong to the negro

race, and the circles are probably pre-Mandingo. Mandingo tradition tells of sacrifices made on or near the stones of these circles by the people who preceded them.

Torday (E.) A neolithic site in the Katanga. (Ibid., 38.) Calls attention to the existence of numerous grooves (the result of polishing stone axes) in the rocks on the Lukonzowa brook, on the shore of L. Meroe.

— Bushongo mythology. (Folklore, Lond., 1911, xxii, 41-47, 2 pls.) Notes on cosmic and origin legends of the Bambala, Bangongo, etc.; hunting-fetish, "nyenge" mask, etc. The "very un-African" items may not be due to European influence.

Tremearne (A. J. N.) Fifty Hausa folk-tales. (Ibid., 1910, xxi, 487-503; 1911, xxii, 60-75, 219-228.) English texts only of Nos. 19-41: The hyaena and the wrestling-match; why dogs and hares do not agree; the dog, the salt, the cake, and the hyaena; the hyaena and the bitch; the cunning goat and the hyaenas; the old woman, the hyaena, and the monkey; why the hyaena and the donkey do not agree; the lambs, the hyaena, the jackal, and the jerboa; why the hyaena and the jerboa can not agree; why the donkey lives in the town; the jackal and the dog at the marriage feast; the contest of wits between the dog and the jackal; the city of women; the boy who refused to walk; how the goat and the dog frightened the hyaena; the beginning of the enmity between the mouse and man; the waterfowl borrows the dove's beak; the search for a bride; the origin of the crow; the woman and her strange suitors; the ungrateful boy and the dove; the most cunning of all the birds; the wild-cat and the cock.

— Hausa folk-lore. (Man, Lond., 1911, xi, 20-23, 52-58.) English text only of 8 tales and legends obtained in 1909 at Jemaan Daroro, N. Nigeria: The boy who cheated death, how the boy escaped from the witch, how the ill-treated girl became rich, Dan Kuchingaya and the witch, the witch who ate her children, the witch who ate her grandchild, the three youths and the three devils, the youth who courted a witch.

- Notes on some Nigerian tribal marks. (J. R. Anthropol. Inst., Lond., 1911, xli, 162-169, 2 pls.) Besides brief account of tribal marks (usually were simple cuts,—others are small dots in parallel lines, lines of short perpendicular cuts representing horns, etc.) on some 100 Nigerian natives of Nassarawa province, calling themselves Hausas, T. gives also measurements (stature, height sitting, height kneeling, head, face and nose measurements, finger-reach, cephalic and nasal index). The last three columns of figures (span, cephalic index, and nasal index) seem not to be quite correct, errors of calculation having crept in.
- Trilles** (H.) Les rites de la naissance chez les Fang. (Bull. Soc. Neuchât. de Géogr., Neuchâtel, 1910, xx, 403-407.) Describes, with some detail, child-birth and ceremonies connected therewith (preparations for parturition; text and music of song at birth of boy, p. 408; treatment of sterile woman, etc.) among the Fang or Pahouin of the French Congo.
- Vallery-Radot** (P.) Un cas d'ectrodactylie et de syndactylie bilatérales et symétriques chez une jeune saharienne. (Rev. Anthropol., Paris, 1911, xxi, 356-358, 1 fg.) Brief account of a case of ectrodactyly and syndactyly in a girl of 6 years, born near Biskra, of parents without any osseous deformations,—her brothers also are well-formed.
- Vischer** (A. L.) Tripoli: a land of little promise. (Nat. Geogr. Mag., Wash., 1911, xxii, 1035-1047, 6 fgs., map.) Contains some notes on the natives, the town of Murzuk, religious societies, industries, etc. See also pages 1056-1059 for extracts concerning Murzuk and the Tuaregs from Mr H. Vischer's book *Across the Sahara*.
- Vix** (Dr) Beitrag zur Ethnologie des Zwischenseengebiets Deutsch-Ostafrikas. (Z. f. Ethnol., Berlin, 1911, xliii, 502-515, 9 fgs.) Treats of the *mbandwas*, an institution of great influence in the region of Kigarama,—a sort of priests, whose bodies are chosen as dwelling-places by spirits (of the 6 female *mbandwas* 5 have a male spirit). On pages 511-513 an account is given of the rock-pictures near Buanja in Kisiba; and on p. 514 a photograph of King Mihigo of Kwidshwi, who has never before let himself be seen by Europeans. See Struck (B.).
- Wainwright** (G. A.) Pre-dynastic iron beads in Egypt. (Man, Lond., 1911, xi, 177-178, 1 pl., 1 fg.) Treats of some iron beads found with pottery of corpus type in two distinctly pre-dynastic graves at El Gerzeh, about 40 miles south of Cairo.
- Walker** (B. W.) A note on "hammer-stones." (Ibid., 85-86.) Records use of these stones by women of German E. Africa to keep rough (by dropping them upon it) the surface of the rock upon which the native grain is ground.
- Weeks** (J. H.) Anthropological notes on the Bangala of the Upper Congo River. Part III. (J. R. Anthropol. Inst., Lond., 1910, xl, 360-428, 7 fgs.) Treats of covenants, oaths, and ordeals (blood-brotherhood for settling family and town quarrels; oaths and asseverations freely used in conversation; drinking (eating) ordeal; ordeals by *epomi* and *mokungu* juice, other ordeals); tabu (*mokumbu* or totem-tabu; *ngili*, or permanent tabu; *mungilu*, or temporary tabu, etc.); religion (*mingoli*, or spirits, and spirit-lore; other names for spirits, their actions, etc.; abnormal events attributed to spirits of recently dead; four words for God,—*Libanza*, *Nzankomba*, *Kombu*, *Njambe*, and lore concerning these; no idols; omens; on pages 377-379 notes on 12 kinds of spirits); dances (*jebola* woman's dance from obsession by spirit; other dances); magic and magicians (list of 18 *nganga*, pp. 382-389; and of 34 charms and their powers, 390-393; curses and their cure; white magic); mythology; history (pp. 398-401); secret societies and initiation-ceremonies (none among the Boloki); circumcision (practiced by all males); music (fond of music; professional singers; songs,—topical, local, funeral; 6 sorts of drums and several rattles; "talking" drum, p. 404; tunes borrowed freely from other tribes); games (list of 14 played by Boloki boys and girls, pp. 405-408); swimming (good swimmers and divers); navigation (two shapes of

canoes; use of canoes, etc.; vocabulary relating to canoes, etc., pp. 411-412); war (no army and no organization; family and town fights); customs (greetings and salutations; etiquette; treatment of women and children; bathing, etc.); reproduction (free intercourse until puberty; adultery condemned after bride-price is paid; proof of pregnancy; abortion; large infant mortality; barrenness; child-birth; treatment of twins); abnormalities (albinos rare); artificial deformities (tribal mark on forehead, filing incisors, pulling out eyelashes, etc.); and medicine and surgery (list of 43 names of diseases; names for medicine, methods); marriage, slavery; sundry notes (bull-roarers, spirit in trees, first teeth, funeral rite).

— The Congo medicine-man and his black and white magic. (Folk-Lore, Lond., 1910, XXI, 447-471.) Gives a list (with explanatory notes) of 49 *ngangas* (= sorcerer, exorcist, witchfinder, fetish-priest, healer of diseases, diviner, conjurer, etc.—both sexes; no one exercises all these functions, each being expert in his particular line). There is "a *nganga* for every known disease, and one for every possible emergency in native life." In the ceremonies of some *ngangas*, white magic is more effective than black; both are practiced by most, "the same fetish being invoked in a slightly different way."

Westermarck (E.) The popular ritual of the great feast in Morocco. (Ibid., 1911, XXII, 131-182, 2 pls.) Detailed account (probably the first full study) of the great yearly sacrificial feast, on the tenth day of the month of Du'l-hijja, of the Mohammedans of Morocco. The rites and customs connected with it are of various sorts: Practices of a purificatory or sanctifying character, intended to prepare the people for the holy feast, and its chief feature, the sacrifice; preparatory practices, intended to purify or sanctify the sacrificial animal, and also the instrument with which it is to be slaughtered; the act of sacrifice itself; practices by means of which the people aim to utilize the *baraka*, or benign virtue, of the sacrificed victim; practices, by means of which

they aim to guard themselves against, or rid themselves of, the evil influences of the feast and its sacrifice. The Arabs of Morocco call it "The Great Feast," l-'id'l'kbir. Notable is the prevalence of cathartic ceremonies, and Dr W. suggests "a possible explanation of the principal feature of it, the sacrifice, which was borrowed by Islam from pre-Muhammedan Arabian paganism,"—its primary object may have been "to expel evils which were supposed to threaten the people at the time of the year when the sacrifice took place." The ancient Arabs were great believers in the magic influence of certain periods.

Witte (A.) Menstruation und Pubertätsfeier der Mädchen im Kpandugebiet, Togo. (Baessler Archiv, Lpzg. u. Berlin, 1911, I, 279-280, 1 fg.) Describes menstruation taboos and practices (seclusion, bathing; no food-taboos, but food cooked in separate vessels), and puberty-ceremonies with songs (texts and translations of 4 brief ones) among the Kpandu of Togo-land. A man whose wife has died in pregnancy finds it difficult to get another; if two have died he can scarcely ever obtain a third.

de Zeltner (F.) Les grottes à peintures du Soudan français. (L'Anthropologie, Paris, 1911, XXII, 1-12, 13 fgs.) Treats of the caves of Bamako, Kita, Boudoufo, etc., in the French Sudan and the painted figures (mostly red, sometimes black and white) of men, horses, animals, compartment-signs, feather and alphabetiform signs, hand-silhouettes, claviform signs, and others, some of which may be ignorant attempts at copying Arabic inscriptions. One of the animals represented is possibly a camel. While resembling in some points the cave-paintings of Europe and the Algerian rock-drawings these cave-paintings of the Sudan belong rather with "the aversion for realistic art belonging to the western basin of the Mediterranean (cf. Berber art)"—the genius of Altamira is lacking. Some pieces of rock from Bamako with paintings on them are now in the Musée du Trocadéro.

ASIA

Albers (A. C.) A daughter of the zenana. (Open Court, Chicago, 1911. xxv, 667-684.) Literary sketch of "the typical life of a Hindu woman of high caste,"—childhood, courtship, wedding, married life, death.

Baelz (E.) Dolmen und alte Königsgräber in Korea. (Z. f. Ethnol., Berlin, 1910, XLII, 776-781, 2 fgs.) Notes on dolmens (most numerous in the valley of the Kurionggang, a northern tributary of the Shing-Shonggang) and old royal graves (near Wunsan) in northern Korea. These dolmens are probably the work of a people coming from Manchuria, and they probably date back into the second millennium B. C., at least. The royal graves belong in historical times.

Banninga (J. J.) The Indian census of 1911. (Nat. Geogr. Mag., Wash., 1911, XXII, 633-638, 4 fgs.) Notes on methods and incidents of census of India, taken on the evening of March 10, 1911. Most of the cities show gains, sometimes *ca.* 20 %; rural communities show less increase.

Boerschmann (E.) Einige Beispiele für die gegenseitige Durchdringung der drei chinesischen Religionen. (Z. f. Ethnol., Berlin, 1911, XLIII, 429-435, 7 fgs.) Treats of the mutual influencing of one another by the three Chinese religions (Taoism, Confucianism, and Buddhism) with special reference to the ground-plan of a temple found by the author in the north of the province of Szechuan, and its general and particular structure, showing a remarkable mingling of the ideas of the three religions,—figures of deities, altars, etc. Besides this stone-temple of Lo-kiang-hien, B. cites the Buddhistic influences in the sanctuary on Heng-shan, one of the five holy mountains of ancient China. In the temple of the iron Buddha, on the same mountain are Taoistic figures, etc.

— Ein vorgeschichtlicher Fund aus China, Provinz Schantung. (Ibid., 153-160.) Describes and discusses the discovery of a glazed clay vessel, dating from *ca.* 500 B. C., during the process of digging a well at Tsing-chow (Shantung).

Bonifacy (Lt.-Col.) Les métis franco-tonkinois. (Rev. Anthropol., Paris, 1911, XXI, 259-266, 2 fgs.) Observations on French-Tonkinese *métis* made in 1907-1911. Physical characters (*métis* generally fine from physical point of view; resemble European more in stature; deformations rare; "blue spots" in sacral region rare; skin color darker than European; blue eyes not unknown; hair on body less developed than with Europeans; mesaticephaly predominates, with occasional dolichocephaly; voice more metallic than European; growth of children slower than European, but reach and often pass the latter at puberty, 12 for girls, 14 for boys; resemblance to Europeans often very great in second generation); intellectual and moral characters (girls often exceed European in domestic labors; succeed well in school; not more immoral sexually than European children; girls make good wives; young *métis* seek office; abandoned children well-treated by Anamites; defects of *métis* not racial). *Métis* are quite numerous in Tonkin.

Braidwood (H. S.) and Crooke (W.) A note on the meaning of "Meriah." (Man, Lond., 1911, XI, 38.) Suggests that *meriah*, applied to human sacrifice among the Khonds, is "probably the Oriyah form of the Kandh *meroi*, *mervi*, or *mrivi*," a human victim.

Brewer (E. H.) Peculiar caves of Asia Minor. (Nat. Geogr. Mag., Wash., 1911, XXII, 870-875, 5 fgs.) Brief account of visit to the ancient and modern "cone-houses" of the Urgub region. According to Prof. Sterrett, "the cones of Cappadocia were well known and inhabited in the dim distant Hittite period, at about 1900 B. C."

Carus (P.) The fish in Brahmanism and Buddhism. (Open Court, Chicago, 1911, XXV, 343-357, 12 fgs.) Treats of Manu and the little fish (in one version Brahma), the fish-incarnations of Vishnu, Agni and the fish, fishes as good omens in ancient India, Buddha's fish-incarnations, the power of the *rohita*-fish, fish in funerary ornamentation, fish-gongs and fish-drums, in China, etc. Buddha and

Christ are both represented as "fishermen."

— The fish as a mystic symbol in China and Japan. (*Ibid.*, 384-411, 20 fgs.) Treats of the tale of K'in Kau and the carp, a popular fairy-story, Kwan-Yin and the fish, the Japanese Daikok and Ebis (the gods of bliss), demon with fish, fish as ornament in ancient China, association of fish with sun, the fish-tailed Fuh-Hi and Nü-Wa, fish as symbol of good luck in China and Japan, combination of fish and bird, etc.

— The fish in Christianity. (*Ibid.*, 435-441.) Treats of references to fish in the Bible, the *Ichthys* symbol, etc. Also the representation of the church as a ship (the thwart became the cross).

— A Buddhist Veronica. (*Ibid.*, 650-666, 1 pl., 15 fgs.) Treats of the Christian legends of King Abgar and Veronica and the Buddhist story of King Ajatasatru (frescoes of the caves of Qyzyl near Kutcha, discovered by Grünwedel, antedating the same idea in Christian art). Dr C. thinks the Veronica legend may have possibly come from the East to the West.

Chapin (W. W.) Glimpses of Japan. (*Nat. Geogr. J.*, Wash., 1911, XXII, 965-1002, 44 fgs.) Contains notes on funeral-service, temples, official recognition of Shintoism, child-life, pilgrimages and shrines, cemeteries and funeral-tablets, *torris*, etc. The pictures represent methods of carrying by men, women, and children, temple and other religious scenes, dancing-girls, etc.

Clement (E. W.) A "blind calendar" or calendar in rebus. (*Trans. As. Soc. Jap.*, Yokohama, 1910, XXXVIII, 50-55, 1 fg.) Reproduces, with description and interpretation, "a picture of the lunar calendar of the 38th year of Meiji (1905)." The model of the rebus is fixed, the dates only being changed from year to year. This pictorial calendar is said to be very ancient in the Nambu district of northeastern Japan, and was there named *Mekura-Koyomi* or "blind calendar."

Crahmer (W.) Über beilartige Waffen im indischen Kulturgebiet. (*Baessler-Archiv*, Lpzg. u. Berlin,

1911, I, 135-142, 18 fgs.) Treats of bronze axe-like weapons from Java and parts of India (similar weapons appear in the cave-frescoes of Ajantâ, in the Tapti valley and on Lamaistic miniatures, in forms no longer to be found in India). The home of this weapon is somewhere in Northern India, probably Nepal; the Javanese specimens represent a cultural conventionalizing of a special form of these Indian weapons.

Crooke (W.) King Midas and his ass's ears. (*Folk-Lore*, Lond., 1911, XXII, 183-202.) Discusses this tale in Phrygia, Greece (still current in its original form), among the Celts (the Irish king Labradh Loingseach; "the king with the horse's ears"; Welsh tale of March Amheirchion, one of Arthur's warriors; various Breton tales), the Teutons (W. Friesland), Portugal, Morocco, the Berbers, the horns of Alexander the Great; tales of the Mongolo-Iranian type ("the king of Black China"; Turkoman story of ass-eared Jany Bek Khan; Persian story of king Shapur; the ass-footed *Rā* of Gilgit; the horned raja of Mirzapur; Santāl story of the ox-eared raja's son; ass-eared raja of Betudpore, a Mysore version; Arakan tale of boar-tusked king), etc. C. thinks that the Midas legend started from the region of the eastern Ægean. The tale itself grew up on the basis of inability to keep secrets, the ass's ears, etc., are due to some animal-cult,—the story being afterwards "connected with a half-forgotten and misunderstood form of ritual, which prevailed throughout Asia Minor and the one subject to Mycenaean culture."

— Indian folk-lore notes. III. (*Ibid.*, 229-231.) Notes on the marriage of a god (Tamil festival in the Shevaroy hills); observances at the Hindu New Year; field-spirits in the Konkan.

Cumont (F.) Babylon und die griechische Astronomie. (*Neue Jahrb. f. d. Klass. Alt.*, Lpzg., 1911, XXVII-XXVIII, 1-10.) Treats of the Babylonians in relation to Greek astronomy. According to C., the debt of the Hellenes to Babylon was at first exaggerated, but certain borrowings were undoubtedly made, such as the

duodecimal and sexagesimal systems of measuring time and things, the *gnomon* (instrument for taking observations), the knowledge of the most important data of uranography, the ecliptic, the signs of the zodiac and the planetal series. Even after the Persian wars some borrowings also took place of a calendaric nature, lunar ideas, etc.

Del Campana (D.) *Intorno ai Sadhus dell' India inglese, monaci mendicanti.* (Arch. p. l'Antrop., Firenze, 1910, XL, 374-380, 4 fgs.) Treats of the Sadhus, begging monks (abstainers from all luxury, tobacco, betel, opium; non-resisting, except for personal defense; industrious; monogamous; more or less eclectic; having convents at Lahore, etc.). Their sacred book is the *Dadupanthi*, the life of Dadu (their founder), written in the Kindi language. Their dress, paraphernalia, etc., are described.

Divine Child of India (A.) (Open Court, Chicago, 1911, XXV, 702-703, 1 fg.) Notes on "India's divine babe," a girl of Vizayavada in the Kistna district of the Madras Presidency, who is now the subject of the worship of a certain circle of the native population.

van Doort (K.) A royal cremation. (Century Mag., N. Y., 1911, LXXXII, 751-755, 3 fgs.) Brief account of the ceremonies in connection with the cremation at Bangkok on March 16, 1911, of the remains of the late king of Siam, Chulalongkom.

Edmunds (C. K.) Science among the Chinese. (Pop. Sci. Mo., Lancaster, Pa., 1911, LXXIX, 521-531.) Pt. I Treats briefly of Chinese anatomy, materia medica, botany and zoology, geography, astronomy-astrology, mathematics, action and reaction of elements, chemistry-alchemy, general cosmological ideas, etc. According to Dr E., "in scientific knowledge, as in nearly everything else, China presents a case of arrested development."

Fassett (E. C. B.) A treasure of ancient Chinese bronzes. (Amer. Mus. J., N. Y., 1911, XI, 59-65, 7 fgs.) Notes on the unique collection made for the Museum by Dr B. Laufer in 1901-1904: libation cup, decorated mirror, sacrificial grain-

vessel, sacrificial wine-jar, "hill" censer, cooked-meat vessel, temple-bell, etc. The oldest specimen is the libation-cup used during the Shang Dynasty (B. C. 1766-1122).

Fitzpatrick (F. W.) The influence of Oriental art. (Open Court, Chicago, 1911, XXV, 594-620, 21 fgs.) Points out Oriental flavor, suggestions, etc., in certain American structures: Terminal of McAdoo tunnel, Singer tower, N. Y.; a San Francisco building; the Pittsburg court-house; a Minnesota bank, etc. References are made to the Mosque of St. Sophia, the Taj Mahal, St. Mark's cathedral (Venice), the shrine of Hussein and Abbas (Kerbela), the Alhambra, the tomb of I'timadudaulah (Agra), the Hall of Classics (Pekin), etc.

Fowle (T. C.) Report on a bath newly excavated at Tadmor, Palmyra. (Man, Lond., 1911, XI, 120.) Brief note on bath, at hot springs, discovered in 1910.

Frachtenberg (L. J.) Allusions to witchcraft and other primitive beliefs in the Zoroastrian literature. (Dastur Hoshang, Mem. Vol., Bombay, 1911, 399-453.) Treats of sorcery and witchcraft (attitude of ancient Iranians altogether hostile to black magic; sin of witchcraft a product of the wicked creation of Ahriman); wizards, witches, *kavis* and *karpans* (the Iranian witch is more of an enchantress; various noxious creatures were thought to be born of the union of witches and wizards with demons,—also the negro); evil eye (and counter-belief in good-eye); nail-paring and hair-cutting (burial of these); noxious creatures (mouse, weevil, tortoise, frog, lizard, scorpion, snake, worm, ant, locust, spider, gnat, toad, louse; bear, ape, cat, wolf, hawk); miscellaneous (taboo of night-time libations and offerings, etc.; continual fire in house of pregnant woman or newborn child; holiness of cock and certain other animals; taboo against urinating or voiding faeces while standing or walking; sacred girdle or shirt; law against talking while eating or drinking, etc.); spells and exorcisms (Airyaman prayer Ahunaver prayer, names of Ahura Mazda, charms, etc.). The primitive customs

considered are all pre-Zoroastrian, but Zoroastrianism, while unable to eradicate them, "at least modified them and gave them a religious character."

Goldziher (I.) *Magische Steine.* (Arch. f. Religsw., Lpzg., 1911, XIV, 308-309.) Cites examples from Arabia of the practice of passing childless women over "magic stones" to make them capable of being pregnant.

Grimme (H.) *Das Alter des israelitischen Versöhnungstages.* (Ibid., 130-142, 1 fg.) Discusses the antiquity of the Jewish day of reconciliation and ceremonies therewith connected. G. regards it as an old part of the law. The demon Azazel is to be explained from the northwestern Arabian steppe (cf. the rock-hewn figures of demons at el-Oela, etc.).

Haas (H.) *Lautes und leises Beten.* (Ibid., 1910, XIII, 619-621.) Cites data concerning loud and silent prayer from the *Sai-yō-shō*, a work by a priest of the Jōdo sects of Buddhists in Japan, written ca. 1300 A. D. The spoken word is better, but neither is insufficient to help enter the eternal life.

Heard (W. B.) *Notes on the Yezidis.* (J. R. Anthropol. Inst., Lond., 1911, XLI, 200-219.) Treats of history and origin (tribal myths; Sheikh 'Adi), religious beliefs, (deities of good and evil, minor deities), the last day, the 9 archangels, the creation (legends), the ark (rested on Mt. Sinjar), the seven sanjaks (clans), religious hierarchy, secret rites, birth-customs, betrothal (same as among Kurds), marriage and divorce, burial (specimen prayer), clothing (white; blue is forbidden), fasts, exemption from military service (on account of religious taboos), the New Year, names, superstitions (charming, etc.), Sheikh 'Adi's pilgrimage, shrines, sacred books. On pages 215-219 are given Chapters 1-5 of the *Jelwet*, one of the sacred books of the Yezidis, adopted from a translation of a Chaldean ecclesiastic of Mosul, made in 1901.

Huntington (E.) *Physical environment as a factor in the present condition of Turkey.* (J. of Race Develop., Worcester, Mass., 1911, 1, 460-481.) Treats of nomadism (chief

cause of present status of Turkey; Turk not permanently and inevitably a nomad); unrest and devastation on borderlands (largely due to nomadism); diversity of races; incompetence, inertia, laziness, hopelessness not necessary qualities of Turkish race, but due to physical environment; religion (innate character of Turks may not be greatly inferior to that of Christians). The problem of the Turkish empire one of adaptation and the elimination of undesirable qualities. Improvement of physical environment is absolutely necessary. The race is not necessarily bad at the core.

Jacobi (H.) *Der Jainismus.* (Arch. f. Religsw., Lpzg., 1910, XIII, 615-618.) *Résumés and critiques of recent works on Jainism:* Guérinot's *Essai de Bibliographie Jaina* (Paris, 1906) and *Répertoire d'Épigraphie Jaina* (1908), Barnett's *Antagada-dasō and Anuttaro vavāiya-dasō* (London, 1907), and various monographs including periodical articles by Jacobi, Suali, Belloni-Filippi, Charpentier, Satis Chandra Vidyabhusana, Hüttemann, Hertel, Meyer, Ballini, etc.

Jenkins (H. D.) *A word about Turkish women.* (Open Court, Chicago, 1911, xxv, 264-270.) Treats of the change wrought in 1908, the occupations open to Turkish women, the work of Halideh Hanum, Halideh Salih, etc. A very optimistic view is taken.

Joyce (T. A.) *Note on a number of firesticks from ruined sites on the south and east of the Takla-makan desert collected by Dr M. A. Stein.* (Man, Lond., 1911, xi, 34-36.) Describes and figures typical apparatus for the "twirling" method,—in all cases but one the "female" stick alone was found. These Central Asiatic firesticks "might, from their appearance, perfectly well have come from East Africa. J. suggests Graeco-Buddhist influence in these firesticks, which from the circumstances of their finding, can not be of great age.

Kinnosuke (A.) *Christian missions in Japan.* (Century Mag., N. Y., 1911, 740-750, 6 fgs.) Gives account of the first Protestant Christians in Japan, in the early seventies, etc.

(the author is "an outsider pure and simple"). and progress since. Mr. W. E. Griffiths adds a comment (pp. 749-750), in which he estimates that "at least five million Japanese see in Jesus their Master and in pure Christianity the only hope for Japan, and they more or less earnestly strive to live after his example." By way of families (the social unit), if ever, Japan will become Christian.

Knosp (G.) Rapport sur une mission officielle d'étude musicale en Indochine. (Intern. Arch. f. Ethnogr., Leiden, 1911, xx, 121-151.) Gives results of study of Indo-Chinese (Annamite) music made by author, who resided in Indo-China 1898-1904. History (Annamite music is of Chinese origin; story of invention of music according to Chinese writers, pp. 124-133), melody (music improves from China south; binary rhythm common, ternary rare). Pages 138-149 occupied with Annamite texts; pages 150-151 music of Annamite song. To be continued.

Laufer (B.) King Tsing, the author of the Nestorian inscription. (Open Court, Chicago, 1911, xxv, 449-454.) Treats of the Nestorian missionary Adam, the character of the inscription (Buddhistic influence, aid of native scholar, etc.), literary features, etc. The inscription (discovered in 1625), "is a literary production of the highest order."

— The introduction of vaccination into the Far East. (Ibid., 525-531, 1 pl.) Describes the introduction of vaccination into China, Japan, etc., with particular reference to a color-print (reproduced and explained) by Katsugawa Shuntei, a pupil of Shunyei, with a long inscription by Sôsai Setto.—Shuntei flourished about 1800-1820. The print treats of the introduction of vaccination into Japan, and sometime before 1850 (the print is probably posthumous) "a new deity sprang up," for in this print we have "the conception of a powerful lucky genius, riding on a cow, and driving out, with the force of his spear, the disease of small-pox." The small-pox devil is the typical Japanese *oni*, or the Chinese *kuli*.

v. Le Coq (A.) Sprichwörter und Lieder aus der Gegend von Turfan

mit einer dort aufgenommenen Wörterliste. (Baessler-Archiv, Beiheft I, 1910, iv + 100, 1 pl.) Gives native text, phonetic transcription and translation of 312 East-Turkish proverbs and proverbial expressions from the region of Turfan, collected during the Central Asiatic expedition of 1905; and of 7 love-songs, 2 satirical songs, a song on women, and 3 other songs, from the same region. The vocabulary (pp. 81-100) of words collected at Qara-Chôdscha contains three columns to the page. The dialect of Turfan is not much different from Radloff's Ili dialect of Taran-tchi. According to v. Le Coq the language of Turfan neglects considerably vowel harmony and sometimes admits very strange combinations of consonants. For the appellation of the German Kaiser, which had begun to be used in the form *gilähä'lim* the author was able to substitute *giyôm*, a transcription of the French and less liable to become corrupted. Many of the proverbs are very striking, e. g., "The hero eats the arrow, his child eats excrement," i. e. "the hero dies in battle, his child suffers from poverty"; "an official has neither father nor mother"; "only a fool shows his wife to another." The horse and the dog figure often in these proverbs. The explanations of words in the vocabulary contain many ethnological and folk-lore data.

Mackenzie (R. D.) India's restless neighbors and the Khyber Pass. (Century Mag., N. Y., 1911, LXXXII, 675-680, 6 fgs.) Contains a few notes on the Afghans, etc.

Marie (A.) La découverte récente de deux livres sacrés des Yézidis. (Anthropos, St. Gabriel-Mödling bei Wien, 1911, vi, 1-39.) Native texts and translations of the *Kitebi Jalweh* and *Mashaf Ras*, two sacred Mss. of the Yezidis, the "book of revelation" and the "black book," preserved among the religious books of this sect in the library on the mountain of the Yezidis. The language of these Mss. is said to resemble ancient Kurdish. The alphabet is of a mixed character. See Bittner (M.).

Messing (O.) Über die chinesische Staatsreligion und ihren Kultus. (Z. f. Ethnol., Berlin, 1911, XLIII,

348-375, 7 fgs.) Treats of the Chinese state-religion and its cult,—history development, etc., from earliest times, as represented in sacred books (particularly the Shu-King, the Shi-King, and the Li-Ki), down to the present. The worship of Shangti ("Heaven"), ancestor-cult and sacrifices, the temple of heaven (pp. 363-373) and altar of earth in Peking. M. emphasizes the purity of the ancient Chinese cult (no Bacchus, no Venus, no obscene characters; Yin and Yang were not popular deities, but rather philosophic theories or physical facts). Buddhism, the only foreign culture-element that hitherto has gained a firm and lasting footing in China, is responsible for developments in the direction of priesthood, temples, and picture-cults. M. thinks that in the first period (ca. 2500-1200 B. C.), prehistoric and perhaps half mythical, the ideas handed down by tradition were "purely monotheistic"; then after the Chou period a change to a dualistic view (Heaven and Earth) occurred; and later still in the 6th century B. C., developed the still existing materialistic, or rather agnostic, view with some slight echo of monotheism.

Moller (A. A.) A girls' school in Manchuria. (Parents' Rev., Lond., 1911, XXII, 224-226.) Notes of visit to girls' school in the inland town of Hsin Min Fu. The girls probably "compare favorably with girls of a similar age in English schools."

Mueller (H.) Über das taoistische Pantheon der Chinesen, seine Grundlagen und seine historische Entwicklung. (Z. f. Ethnol., Berlin, 1911, XLIII, 393-428, 18 fgs.) Treats of the origin and development of the Taoist Pantheon of the Chinese, as distinct from the family-pantheon and the Buddhist and Lamaistic pantheons. Terms (*Tao*, *Yin* and *Yang*, etc.); the development of the Pantheon,—the old religion, the Yi-king, Lao-tze, Taoism of the Han-period (golden age), the T'ien-shih (particularly Chang-tao-ling), Buddhism, foreign religions, Persian influences, Manichaeism-Taoistic influences, the montheistic religions, further development), the Taoistic Pantheon in its present form (sources, classification

of the gods,—nature-deities, personification of ideas, deification of prehistoric or protohistoric personalities, deifications from the historical period, Buddhist figures which have made their way into the Chinese Pantheon; Feng-sheu; the Pantheon of the Feng-sheu-yen-yi, etc.).

Müller (W.) Japanisches Mädchen- und Knabenfest. (Ibid., 568-580, 6 fgs.) Treats of the Japanese "girls' festival," celebrated on the third day of the third month (pp. 570-576) and the "boys' festival," celebrated on the fifth day of the fifth month. The reaction of Japan against too much Occidentalization is revealed in one way in the attention given to "the five festivals,"—the other three are the *Jinjitsu* or *Nanakusa*, the *Tanabata*, and the *Choyo* festivals.

Nilsson (M. P.) Ariernas första uppträdande i främre Asien. (Ymer, Stockholm, 1911, XXXI, 153-167, map.) Résumés data (from recent works of E. Meyer, H. Winckler, etc.) as to the first appearance of the Aryans in Asia Minor, etc.

Oberhummer (E.) Die Sinaifrage. (Mitt. d. k.-k. Geogr. Ges. in Wien, 1911, LIV, 628-641, 3 maps.) Discusses the question of the location of the Sinai of the Bible,—views of Burckhardt, Lepsius, Ritter, Tischendorf, Beke, Burton, Grätz, Stade, Wellhausen, Miketta, Gunkel, Meyer, Haupt, Musil, etc. Prof. O. thinks that the recent researches of Musil and Kober have probably made it certain that the Sinai of the Bible was the volcano Hala-l-Bedr, near N. lat. 27° and W. long. 37°. This upsets the theory of the wanderings of the Israelites in the Sinai Peninsula.

O'Brien (A. J.) Mianwali folk-lore notes. (Folk-Lore, Lond., 1911, XXII, 73-77.) Notes on "rain-making," prejudices against shooting by women, and by husbands of women with child, "evil eye," etc., among Panjab *chuprassis* (doorkeepers).

Offord (J.) A Hittite bronze statuette. (Ann. Arch. & Anthropol., Liverpool, 1911, IV, 88-89, 1 pl.) Describes and figures a bronze Hittite statuette probably from the Delta of the Nile, obtained in Cairo in December, 1910. Certain Hindu affinities are suggested by the author. The female figure is

- placed erect upon a lion or panther.
— Life in ancient Babylonia four thousand years ago; as depicted by the Dilbat tablets. (Ibid., 15-21.) Treats of irrigation, legal documents and records, etc.
- Oldenberg (H.)** Der indische Buddhismus 1907-1909. (Arch. f. Religsw., Lpzg., 1910, XIII, 578-614.) Résumés and critiques of literature of Indian Buddhism from 1907 to 1909,—works of Senart, de la Vallée Pouissin, Lehmann, Windisch, Oltramare, Hackmann, Oldenberg, Foucher, Bertholot, Neumann, Pavolini, Norman, Mrs Rhys-Davids, Fuchs, Cowell and Rouse, Dutoit, Charpentier, Schrader, Geiger, Huber, Anesaki, Lévi, Lefmann, Wogihara, Marshall, Stein, v. Le Coq, Sieg and Siegling, Pischel, Thomas, de Zilva Wickremasinghe, van der Bergh van Eysinga, Edmunds, etc.
- Oldest love-letter in the world.** (Amer. Antiq., Benton Harb., Mich., XXXIII, 1911, 40-41.) Cites English text of letter from Gimil Marduk of Babylon to the Lady Kasbuya of Sippara, ca. 2200 B. C. Also English text of part of the Egyptian "Song of the Harper," ca. 2500 B. C.
- Pick (B.)** The Cabala and its influence on Judaism and Christianity. (Open Court, Chicago, 1911, xxv, 321-342, 3 fgs.) Treats of God, Creation, Adam Kadmon, the archetypal man, the cabalistic tree, the realm of the Evil, the Messiah, etc.
- Planert (W.)** Religiöse Bettler in Südindien. (Baessler-Archiv, Lpzg. u. Berlin, 1911, I, 143-154, 4 pls., 10 fgs.) Treats in detail of the religious beggars and mendicants of South India, their relations to religion, dress, paraphernalia, performances, peculiarities, etc. Among the worshippers of Shiva the so-called Pandāram beggars are the most considered, among those of Vishnu the Sattā-daver.
- Proctor (H.)** The migration of Dan. (Amer. Antiq., Benton Harb., Mich., 1911, XXXIII, 22-23.) Notes on the Abbé Fourrière's memoir in the *Revue d'Exégèse Mythologique*, in which, using the "etymological" method, he "traces the origin of human sacrifices among the Greeks to the worship of Baal, brought in by the Danite immigrants," in the time of Elijah. The Celts and the Druids are also Danite, according to F.
- Rose (H. A.)** Sirmâr folk-lore notes. (Folk-Lore, Lond., 1910, XXI, 503-507.) Gives from the Hindu State of Sirmâr, in the southern ranges of the Himalayas, items of folk-medicine, etc.: Native texts and translations of *mantras* for snakebite, bite of black scorpion, for expelling evil spirits from women, for curing fever, diseases of children, etc., charms against rats, etc.
- Ross (E. A.)** The race-fiber of the Chinese. (Pop. Sci. Mo., Lancaster, Pa., 1911, LXXIX, 403-408.) Notes recovery from terrible injuries, resistance to blood-poisoning, rareness of organic heart-trouble, freedom of women from displacement and other troubles peculiar to the sex, resistance to pain, rare succumbing under chloroform, etc. A part at least of the "toughness" of the Chinese, Prof. R. ascribes to "a special race vitality which they have acquired in the course of a longer and severer elimination of the less fit than our North-European ancestors ever experienced in their civilized state."
- Schotter (A.)** Notes ethnographiques sur les tribus de Kouytcheou, Chine. (Anthropos, St. Gabriel-Mödling bei Wien, 1911, VI, 318-344.) Continued from Vol. IV. Treats of the Hē-miao or "black barbarians,"—tribal divisions, dress, occupations (agriculture), marriage (daughter of sister marries son of brother), funerals, totemism, political régime, literature (songs and recitatives), traditions (myths of the origin of man, cosmogonic ideas, deluge, virgin birth), vocabulary (lists of 75 words in Hē-miao and Pē-miao; tribes related to the Hē-miao) (the Tsin-miao; Ja-tse-miao or Ja-kē-miao,—account of duck-breeding, whence the name; Kaō-pō-miao or mountaineers); tribes related to the Kē-teou-miao (the Kē-tang, Chouy-sy-miao, Yang-hoang-miao); doubtful tribes (the Tsē-kiang-miao, Kiou-kou-miao, Yang-pao-miao, Yāō-miao, Tsin-teou-miao, Hoa-teou-miao, Tong-miao or troglodytes, Sy-miao or "western barbarians," Tong-miao or eastern barba-

rians, Tong-jen, etc.); mixed Miao tribes (Long-kia-tse, Tsây-kia-tse, Song-kia-tse, etc.). The Miao are the autochthones of Kwe-Chow. The author thinks they are too subjected to have any future than a subordinate one.

Shakespeare (J.) Notes on the iron workers of Manipur and the annual festivals in honor of their special deity Khumlangba. (J. R. Anthr. Inst., Lond., 1910, XI, 349-359, 1 fig.) Describes smelting, forging, and the annual festival or *La-harauba* (pleasing the god). Khumlangba is represented by "a piece of iron a few inches square." In the ceremonies figure the aged priestess who gets Khumlangba, the *penna* or fiddle players, the *Lai-pham* (or God's place), the fire-kindling and offerings of rice, fishes, etc., invocation and offerings of fruit and vegetables, procession, dances, visit to shrine in market-place, prayers, dances of various sorts, a dramatic performance (goddess, comic man, etc.),—the rites last for 4 days. The parade of engaged couples is not an actual part of the *Lai-harauba*. What occurs after the obeisance and prayer closing the important ceremonies does not matter.

Sing (S. N.) India's "untouchables." (So. Wkmm., Hampton, Va., 1911, XI, 279-290, 5 fgs.) Treats of the "low caste" natives, particularly in Martinpur, settled some ten years ago by some seventy Indian Christian families,—“all of the native Christians of the little town are either pariah converts, or the direct descendants of 'untouchables'; but not one of them follows the hereditary profession of his forefathers.” The progress made is notable.

— The work of the Pundita Ramabai. (Ibid., 562-571, 6 fgs.) Treats of the work of the Mukti Mission at Kedgaon, near Poona, in the Bombay Presidency, where Bible study and industrial training of girls are combined.

— Boys in India, at home and at school. (Ibid., 14-22, 7 fgs.) Treats of home-life (“no easier than school-life”), hours and punishments, vacations, dress, religious ceremonies, marriage (pp. 18-20), plays and

games, the “monkey-man,” juvenile crime, etc.

Smith (M. L.) and Tod (M. N.) Greek inscriptions from Asia Minor. (Ann. Arch. and Anthropol., Liverpool, 1911, IV, 35-44, 1 pl.) Gives 29 inscriptions from 10 places, copied during the Liverpool University Institute of Archeology expedition of 1907,—the route was from Angora (Ancyra) through Galatia, Cappadocia, Cilicia, and Commagene.

Smith (R. A.) The stone age in Chinese Turkestan. (Man, Lond., 1911, XI, 81-83, 1 pl., 1 fig.) Treats of worked stones (mostly jasper), including two jade celts and three arrowheads, collected from the Lopnor desert by Dr M. A. Stein in 1906-1908. S. suggests comparison with the diminutive tools of obsidian, etc., from the kitchen-middens of Japan, specimens from Hakodate, etc., and thinks that “some connection with the extreme east of Asia is not altogether out of the question.”

Starr (F.) Japanese riddles. (Trans. As. Soc. Jap., Yokohama, 1910, XXXVIII, 1-49, 5 fgs., bibl.) General discussion of Japanese *nazo*, etc., with numerous examples (pp. 14-50) in Japanese and English versions. In Japanese occurs the *nazo* (including the true *nazo* analogous to a certain type of conundrum; children's *nazo*, approaching the true riddle; and self-evident *nazo*) and *ehanji* (rebus and pictures). Prof. S.'s collection now includes over 800 *nazo*. See also his article on “The rebus and its kin in Japan” in *The Japanese Magazine* for June, 1910.

— Lolo objects in the Public Museum, Milwaukee. (Bull. Publ. Mus. Milw., 1911, I, 209-220, 8 pls.) Describes and figures articles of dress (cape, skirt, jacket, trousers, cap) and ornament (neckband, ring), carry-net, pipe, bow and arrows, quiver, bowstring, wristguard, sword, scabbard, cuirass, jew-harps, musical pipes. Plates 4-8 contain photographs of Lolos. These specimens probably “the only Lolo objects in the United States” were obtained, during his stay in Sechuen 1899-1903, by Mr O. L. Stratton, from whom they were acquired by the Museum. To Mr S.'s brief notes of

his experiences Prof. S. adds some ethnological items. The "non-Mongolian" appearance of the Lolos is emphasized.

Stone (M. B.) Race prejudice in the Far East. (Nat. Geogr. Mag., Wash., 1910, XXI, 973-985, 6 fgs.) Treats of actions and attitudes of Europeans, etc., towards Asiatics. In face of the danger of Asiatic ethnic solidarity, "it is not the Asian who needs educating; it is the European." Some of the illustrations are of ethnologic interest.

Stönnner (H.) Ein brahmanisches Weltsystem. (Baessler-Archiv, Lpzg. u. Berlin, 1911, I, 119-134, 3 pls.) Treats of a water-color copy of a picture (the original is in the Library of Tanjore) representing the Brahmanic world system, now in the Berlin Ethnological Museum. The picture is of South Indian origin and the deity concerned is Vishnu. Heaven, the human world, and hell are represented. The picture and its divisions are discussed in detail. The variety and complexity of the subject is very striking.

Strange fate of idols. (Open Court, Chicago, 1911, XXV, 699-701, 2 fgs.) Brief account of two Hindu idols (made by Christian artists, and representing St. Anne with her infant on her knees, and the Virgin at the moment of the Annunciation), now both worshipped in the old pagan fashion at Chandor in the Nasik district, India.

Strzoda (W.) Die Li auf Hainan und ihre Beziehungen zum asiatischen Kontinent. (Z. f. Ethnol., Berlin, 1911, XLIII, 193-236.) Treats of the Li of the island of Hainan, China. History (first notices of Hainan 206 B. C.-25 A. D., during earlier Han dynasty), population, name, cosmogony and mythology (point toward Cochin China), tribal divisions and nomenclature (some 15 or 16 different Li-peoples), physical and mental characters (reports quite discordant), government and social arrangements, bodily deformations (distension of ears, perforation of nose,—customs prevailing in Farther India; tattooing of women only), customs and usages (spring-festival; marriage-rites, blood-revenge; offerings to evil-spirits

for the sick), dress and ornament, dwellings (toward the interior the prevailing type is more and more like the Malay pile-dwelling), hunting and weapons (knife, spear, bow and arrow), agriculture. The Hainan Miao live some 40 miles from the west coast, between Chinese and Loi. The Li languages and their relation to those of the continent are discussed (pp. 214-217) and vocabularies given (pp. 222-236) of 13 Hainan languages compared with Miao-tze, Pan-yao, Mo-yao, Siamese, and Annamese. On pages 218-221 grammatical items are given. The Li dialects are probably related to Siamese, etc., and the ancestors of these people in Hainan formerly dwelt somewhere in W. Annam or Siam. Ethnologic no less than linguistic data suggest this.

Suali (L.) Esiste una filologia indiana? (Scientia, Bologna, 1911, x, No. 4, 352-369; also French *résumé*, 191-211.) Discusses recent works on Hindu literature and language (Jacobi, Barth, Grierson, Fausböll, Oldenberg, Garbe, Franke, etc.). S. takes an optimistic view of the status of Indian philology, and looks forward to an approaching renaissance of science in India.

Trotzig (I.) Ur Japans sagovärld. Ymer, Stkhlm., 1911, XXXI, 77-83, 2 fgs.) Discusses Japanese legends with translations (pp. 80-83) of "The story of the plum-tree" and "Maple-tree mountain."

Vinson (J.) Le premier pasteur protestant hindou. (Revue Anthrop., Paris, 1911, XXI, 189-191, 1 fg.) Reproduces from an original drawing of 1744 a portrait of "Rev. Aaron," born in Goudelour in 1695, ordained at Tranquebar, in 1733, "the first Protestant Hindu minister." The open Bible in his hands is intended to display Acts XI, 18 in Greek and Tamil.

Virchow (H.) Über die Weichteile des Chinesinnenfusses. (Z. f. Ethnol., Berlin, 1911, XLIII, 375.) Note on anatomical examination of the feet of a 63 years' old Chinese woman. Details to be published later.

Waddell (L. A.) A note on the derivation of Miri. (Man, Lond., 1911, xi, 86.) Argues that the tribal name

of the *Miri* of Assam means "hill-men"; they call themselves *Mishing*, "men of the soil,"—*mi* is the Tibetan word for "man," and "is found with this meaning amongst most of the Himalayan tribes from Ladak down to Assam." W. considers the *Miri* "a typically Mongoloid people."

Weissenberg (S.) Die syrischen Juden anthropologisch betrachtet. (Ztschr. f. Ethnol., Berlin, 1911, XLIII, 80-90, 4 fgs.) Treats of anthropological characters of Syrian Jews. Tables of measurements and descriptions of types, etc., of 30 males from Damascus and 10 males and 10 females from Aleppo are given. The Damascus Jews are taller (av. 1663 mm.) than those of Aleppo (av. 1645), longer-headed (indexes av. 80 and 84.3), shorter-faced and more "Semitic" in nose-type. Syria never was a "pure-Jew" country; the Aleppo Jews are more mixed (Spanish blood, etc.).

— Die mesopotamischen Juden in anthropologischer Beziehung. (Archiv f. Anthrop., Brnschw., 1911, N. F. X, 233-239.) Gives results of observation, with detailed measurements (height, finger-reach, head and face) of 49 Mesopotamian Jews (18 men from Urfa, 5 from Bagdad, 14 from Kurdistan; 12 women from Urfa, Bagdad, Diarbekr, and Mosul.) According to Dr S., the Mesopotamian Jew is below middle height, with moderate head-circumference and index about 78. Dolichocephaly (rarest in Kurdistan) appears in about 13.5 %. The face is very long (longest in Bagdad); the nose narrow and long and in $\frac{2}{3}$ of the cases "Semitic" in form. Blondness is rare, some $\frac{2}{3}$ being brunette. The Jews in Mesopotamia number still some 60,000. They speak Arabic, some from Diarbekr Kurdish, while Aramaic is said to be still used in a few villages of Kurdistan. It is possible that some are relics of the ten tribes taken captive to Babylon.

Williams (M. E.) Hittite archives from Boghaz Keui, arranged in chronological order. (Ann. Arch. and Anthrop., Liverpool, 1911, iv, 90-98.) Gives 23 items translated from the German transcripts of Dr Winckler in the *Mitt. d. D. Orient-Ges.*, No. 35, Dec., 1907.

Wilson (E. H.) The kingdom of Flowers: China. (Nat. Geogr. Mag., Wash., 1911, XXII, 1003-1035, 24 fgs.) Gives an account of "the wealth of trees and shrubs of China," etc. Some of the illustrations (votive-offering on tree, temples, timber and tea carriers, rock-cave, etc.) are of ethnologic interest. On page 1022 is noted "our debt to China's gardens."

Wingate (J. S.) Armenian folk-tales. (Folk-Lore, Lond., 1910, XXI, 507-511; 1911, XXII, 77-80.) Nos. 4-5: The thousand-noted nightingale (*Hazaran Bulbul*), Tenthousandfold. These are the tenth and third stories in *Manana*.

— Armenian folk-tales. (Ibid., 1911, 77-80.) English text only of No. 5, "Ten thousandfold," the third story in *Manana*.

Woolley (C. L.) Some ancient local pottery from Chinese Turkestan. (Man, Lond., 1911, XI, 129-132, 1 pl., 4 fgs.) Treats of the rougher local products among the specimens brought back by Dr M. A. Stein from his explorations of ancient sites (Mingoi near Kara-shahr, 6th-9th centuries A. D.; Miran, ca. 9th century A. D.; Lop Nor; Yotkan; Akterek; So-yung-chêng, etc.) in Chinese Turkestan and westernmost China. At Yotkan the Gandhara influence is marked, although purely Chinese motives of decoration sometimes occur; Akterek shows numerous analogies (e. g. glazed handles of the shape common on Roman lamps).

Wright (A. R.) Chinese tree-worship and trial by ordeal. (Folk-Lore, Lond., 1911, XXII, 233-234, 1 pl.) Note on case of tree-worship near the city of Yung-Ping-Fu, province of Chihli.

INDONESIA, AUSTRALASIA, POLYNESIA

Barrows (D. P.) The Negrito and allied types in the Philippines. (Amer. Anthrop., Lancaster, Pa., 1910, N. S., XII, 358-376.)

Bean (R. B.) Philippine types. (Ibid., 377-389, 9 pls., 2 fgs.)

Beech (M. W. H.) "The swine of Delaga." A Borneo fairy story told the author by one Ponghulu Arsat, a

- Tutong chief resident in Labuan. (Man, Lond., 1911, xi, 3-6.) English text only of tale concerning marriage of human beings with "pig-maidens."
- Punans of Borneo. (Ibid., 17-18.) Brief notes on method of walking, use of blow-pipe, "silent trade," etc.
- Benedict (L. W.)** Bagobo fine art collection. (Amer. Mus. J., N. Y., 1911, xi, 164-171, 8 fgs.) Notes collection from Bagobos of southern Mindinao (pagan Malays) recently installed: Dress (beadwork, brass leglets, scarf and child-hammock), man's carrying-bag, woman's guitar, hemp-fiber patterns, basketry, bamboo, etc.
- Boyd (C. T.)** A country fair in Moroland. (Century Mag., N. Y., 1911, LXXXII, 681-685, 3 fgs.) Describes Moro fair and *fiesta* held at Cotabato,—the "First Moro Agricultural and Industrial Fair." Exhibits from the Buldom Plateau, Maguindanao, from the pagan Monobos, Bilans, Tiruray, etc., were on view. Many chiefs were present from various parts of the country. The Tiruray dancing girls, Moro girls, etc., were attractions.
- Brown (G.)** A secret society of ghouls-cannibals. (Man, Lond., 1911, xi, 68-69.) Brief description of the *kikipito* (initiation; eating of flesh stripped from dead bodies) society of the region about Bom and Eratubu on the west coast of New Ireland. This ritual cannibalism was practiced to get back the strength, spirit, and influence lost by death in war, etc.
- Brownell (A.)** Turning savages into citizens. (Outlook, N. Y., 1910, xcvi, 921-931, 10 fgs.) Treats of the Moros of Mindanao and Jolo and the work of Gov. Finley in establishing the "Moro exchange" at Zamboanga, leading to "a revolution of savage customs and manners, modes of living and in dealing with each other and with the Government."
- Conant (C. E.)** Consonantal changes and vowel harmony in Chamorro. (Anthropos, St. Gabriel-Mödling, bei Wien, 1911, vi, 136-146.) Discusses with numerous examples change of Indonesian *p* to *f* in Chamorro, *b* to *p*, *k* to *h*; the *rld* and *rgl* laws; parasitic *g* or *gw*; also the influence of *i* on an *o* or *u* of the following syllable,—*o* becomes *e* and *u* becomes *i*. The vowel *a* is also subject to similar harmonic change.
- Monosyllabic roots in Pampanga. (Journ. Amer. Orient. Soc., N. Y., 1911, xxxi, 389-394.) Pampanga shows a number of monosyllabic roots, due to contraction from the corresponding Indonesian dissyllabic forms (a list of 35 is given). The author notes "an instructive tendency to restore the dissyllabic character of the affected words which, as monosyllables, were felt to be incomplete, by prefixing a colorless vowel, generally *a*." Pampanga shows "a variety of striking phonological peculiarities not shared by its neighbor (Tagalog)."
- Dempwolff (O.)** Sagen und Märchen aus Bilibili. (Baessler-Archiv, Lpzg. u. Berlin, 1911, i, 64-102.) Native texts with translations of 10 tales and legends (2 totemic tales, a savior-legend,—7 minor tales of the sky-woman, the flute-player, origin of coconut, fire, kava, tobacco, why dogs do not speak any more) obtained in March-April, 1906 from an 18-year old man from Bilibili (Astrolabe Bay, Kaiser-Wilhelmsland, German New Guinea). Totemism is here understood as "belief in relationship with, or descent from, animals (e. g., as here, crocodile and pig). Kilibob and Manumbu, the brothers, figure as saviors; fire was obtained from the *pudenda* of an old woman; tobacco came from the stars; the coconut grew up from the skull of an old dwarf.
- E. W. Clark** collection from New Zealand (The). (Univ. of Penn. Mus. J., Phila., 1911, ii, 30-42, 15 fgs.) Gives extracts from Cook's account of the New Zealanders (pp. 31-35). Also notes on tattooing, house-posts, paddle-blades, carved heads of wooden staves and blades of *tiahas*, *mere* or jade club, whale-bone clubs, carved wooden dancing clubs, carved wooden boxes, *heitiki* or personal ornament of jade, etc.
- Fischer (H. W.)** Planggi-Tücher aus Atjeh, Sumatra. (Intern. Arch. f. Ethnogr., Leiden, 1911, xx, 1-6, 2 pls.) Figures and describes 2 silk *planggi*-cloths (one white, one pink)

from Achin, collected by Capt. Veltman in 1907 and now in the Royal Ethnographical Museum, technique, ornamentation, etc. These cloths belong with "tie and dye work." The native names of the various parts, devices, processes, etc., are given.

Gomes (E. H.) Notes on the Sea Dyaks of Borneo. (Nat. Geogr. Mag., Wash., 1911, XXII, 695-723, 26 fgs.) Treats of history, peculiar fashions, long communal houses, catching fish with poison, hunting crocodiles, edible birds' nests, etc. The illustrations (costumes of women, children, houses, industrial scenes, fishing, warriors, blow-pipe, etc.) are good. The article is based on the author's *Seventeen Years among the Sea Dyaks of Borneo* (N. Y., 1911).

Ingram (J. N.) Wood-carving in New Zealand. (Century Mag., N. Y., 1911, LXXXII, 773-775, 5 fgs.) A few notes on Maori carvings with illustrations (house-decorations, bowl, etc.) from photographs.

Knapp (C.) Deux statuettes de l'île de Pâques. (Bull. Soc. Géogr. Neuchâtel, Neuchâtel, 1910, XX, 465-466, 2 pls.) Brief description, with figures of two wooden statuettes from Easter I., in the Ethnographic Museum of Neuchâtel, and not cited by Lehmann in his *Bibliography of Easter I.* published in *Anthropos* in 1907.

Kunz (G. F.) New Zealand jade. (Amer. Mus. J., N. Y., 1911, XI, 57-58.) Notes on occurrence, uses, etc. The Museum possesses the largest (3 tons) specimen of jade in any collection,—obtained in 1902 from South Island, N. Z.

Lang (A.) Mr Mathew's theory of Australian phratries. (Man, Lond., 1911, XI, 85.) Argues against M.'s view that phratries in Australia "are the result of a combination with *connubium* of two races, primarily distinct." It does not seem physiologically possible.

— Kabi sub-class names. (Ibid., 3.) Points out perplexity resulting from different statements of Howitt and Mathews. L. thinks Mathews is right about female descent. See Mathews (R. H.).

Lowie (R. H.) The new South Sea exhibit. (Amer. Mus. J., N. Y., 1911, XI, 53-56, 3 fgs.) Treats of Maori

carved canoe prow and (particularly) statue of Maori warrior by S. Neandros, from a cast made of Hautuotearangi, a young Maori, playing during the winter of 1910, in the Hippodrome, New York.

v. Luschan (F.) Zur Stellung der Tasmanier im anthropologischen System. (Z. f. Ethnol., Berlin, 1911, XLIII, 287-289.) Critique of article of H. Basedow in previous volume on the Tasmanian skull as an insular type. According to Dr v. L. the Tasmanians are Melanesian, not Australian, although both these of course have the same ancestors. The spiral hair-form may have first arisen among the pigmies and may, indeed, be somewhat connected mechanically with dwarf-growth. See also remarks of Klaatsch on pages 291-292.

— Über Pygmäen in Melanesien. (Ibid., 1910, 939-945, 2 fgs.) Discusses the question of pigmies in Melanesia (certain skeletal remains indicate the former existence of small-statured people on the Admiralty Is.; in various parts of New Guinea living pigmies have been met,—on the Gogol by Lauterbach, on the central Ramu by the German expedition of 1896, among the Kai by Pösch and Neuhauss, etc.). According to Dr v. L., a very small skull from the Kaiserin-Augusta River and certain small skulls from New Ireland and New Britain are those of pigmies. He is of opinion that pigmies, wherever found, are merely local stature-varieties of man, fixed racially by long isolation, retaining subsequently in changed environment their acquired characters.

— Zur Ethnographie des Kaiserin-Augusta-Flusses. (Baessler-Archiv, Lpzg. u. Berlin, 1911, I, 103-117, 35 fgs.) Treats of the pottery (large clay vessels, decorated in the style of European prehistoric, face-urns, with pigs' heads; covers decorated with conventionalized human faces; vessels in form of a human face; painted clay pigs' heads, etc.), carved and painted (human face) hair-ornaments of *Erythrina* wood, and other specimens of wood-carving (bird hair-ornament and another bird-carving; canoe-beaks; horns, end-pieces for betel-cases, etc.), textile

objects (masks, rain-mantle), prepared skulls, etc., chiefly from the central Kaiserin-Augusta River, New Guinea,—these specimens are now in the Berlin Ethnological Museum.

— Vier alte Helme aus Polynisien. (Ibid., 118, 4 fgs.) Note on four old coconut-fiber helmets (two have feather ornaments). Two are from the Cook collection (Tuburi), the exact origin of the other two is not known, though undoubtedly from some part of Polynesia.

Maass (A.) Wahrsagekalender (kutikā) im Leben der Malaïen Zentral-Sumatras. (Z. f. Ethnol., Berlin, 1910, XLII, 750-775, 1 pl., 21 fgs.) Treats in detail, with facsimile Ms., of the *kutika* or divinatory calendars of the Malays of Central Sumatra, their varieties, use, etc. The two chief varieties are the five-sectioned and the seven-sectioned. The word *kutika* is of Sanskrit origin. The author's collection of *kutikas* came from Taluk on the Kuantan and Gunung Sahilan on the Kampar Kiri. Hindu influence is marked.

Mathews (R. H.) Matrilineal descent in the Kaiabara tribe, Queensland. (Man, Lond., 1911, XI, 100-103.) Criticises Lang and Thomas, who have been misled by the data in the late Mr Howitt's book, and his mistaken report of the Kaiabara divisions.

Mayer (O.) Die Schiffahrt bei den Bewohnern von Vuatom, Neu-Pommern, Südsee. (Baessler-Archiv, Lpzg. u. Berlin, 1911, I, 257-268, 1 pl., 21 fgs.) Treats in detail of the manufacture, equipment, ornament, use, etc., of vessels among the natives of Vuatom (New Pomerania) in the South Pacific: Rafts (of bamboo, banana-stems, etc.), toy-boats (of coconut shells, leaves), outliers, instruments used, progress of work and "magic" (songs, etc.) employed, paddles, masts, sails, etc., canoes in ceremonial and art. The natives of Vuatom are skilful navigators. Boys of seven know how to paddle and steer; women show less ability in managing boats.

Modigliani (E.) Il tatuaggio degli indigeni dell' Is. Sipora, Arcipelago Mentavei. (Arch. p. l'Antrop., Firenze, 1910, XL, 450-454, 8 fgs.)

Treats of tattooing (with males a sign of right to sit in meetings, etc.; with women mere ornament) among the natives of Sipora, one of the islands of the Mentawai group, off the coast of Sumatra. The native names of all the lines, etc., are given. Volz is wrong in thinking that recondite meanings are hidden in these terms. Mentawai tattooing follows the anatomical lines of the body.

Moszkowski (M.) Die Völkerstämme am Mamberamo in Holländisch-Neuguinea und auf den vorgelagerten Inseln. (Z. f. Ethnol., Berlin, 1911, XLIII, 315-346, 8 fgs.) Treats of the coastal and inland tribes of the river Mamberamo, etc., in Dutch New Guinea. Coastal tribes' situation, migrations, physical characters (certain things suggest the Veddas and wild tribes of Farther India,—hair, small stature, bony structure, short limbs, convex upper lip, etc.), languages (those of coast tribes Malayo-Polynesian; the interior tribes Papuan), temperament and imagination (great liars and gesturers), intelligence and desire for knowledge (very inquisitive; interested in European languages and clever at repeating words), clothing and ornament (tattooing among coast-tribes only), origin-legend (human ancestor a great fish), totemism, marriage-customs, religion (good and evil spirit; culture-hero tale of coast-tribes, etc.), songs and dances (Papuan have marked dramatic sense; amulets consecrated in dances at the full moon), trade, hunting (pigs, cassowaries, etc.), food and its preparation. Inland tribes taller and more powerfully built; art-sense rude as compared with tribes of the Augusta River; paddle unknown generally on south river; rôle of women more important than among coast tribes; food-differences between the sexes; homosexual orgies of "men's house"; imitation of boys with festival in "men's house," etc. In the discussion Hr Neuhauss suggested missionary influence in the culture-hero legends and the flood-myth and Hr W. Müller noted that the test of Papuan as against Melanesian languages was grammatical not lexical. Hr Neuhauss also doubted whether

these inland tribes were "genuinely Papuan."

— Bericht aus Neu-Guinea. (Ibid., 1910, XLII, 948-953.) Reports progress under date of July 25, 1910. from the mouth of the Mamberamo. A vocabulary of 600 words of the Kamboi Ramboi Koassa and data concerning their religion, festivals, customs, etc., were obtained. The deities Mangossi (creator and ruler of the dead) and Sinombi (evil spirit) of the coast tribes (pp. 949-950) are not known to the inland peoples; the moon-cult of the coast tribes has developed into a religion. Amulets are much in use. M. obtained material in three native languages, 30 phonographic records, 150 photographs, measurements of 60 individuals, a large number of drawings, ethnological specimens, etc.

Neuhauss (R.) Über die Pygmäen in Deutsch-Neuguinea und über das Haar der Papua. (Ibid., 1911, XLIII, 280-287.) Treats of the pigmies of German New Guinea (the chief center is in the Sattelberg region near Finschhafen). Physical characters (broader-skulled than the taller tribes, very small hands and feet, short and broad ear, convexity of upper-lip part), etc. The Pigmies of New Guinea are not a mere chance phenomenon (they have a rôle in myth and story); they are not a product of "misery." At pages 282-285 the hair of the Papuans is discussed,—form, color, etc. (artificial coloring is known). The frequent occurrence of blond hair among Papuans, according to N., separates them from the African Negro, whom they resemble so closely in some other hair-characters. In the discussion Fritsch pointed out that the resemblance of the hairs of human races of the same hair-type (there are only 3 hair-types) is often astonishing, although these races may not belong to one and the same "human race," as generally understood.

— Reise nach Deutsch-Neu Guinea. (Ibid., 1911, XLIII, 130-132.) Notes on visit to Kaiser Wilhelmsland in 1908-1910. N. brought back with him hundreds of photographs of natives, etc. The results of the expedition will shortly be published in 3

large volumes. The most remarkable object hitherto reported from New Guinea is a small figure of hard green stone exceeding in technique all other stone objects from this region, but altogether Papuan. The green stone is found at Huon Gulf, where the figure was used for "magical" purposes. See also p. 140.

— Kinematographische und phonographische Aufnahmen aus Deutsch-Neuguinea. (Ibid., 136-138, 1 fig.) Further notes on expedition of 1908-1910. The numerous cinematograph pictures include men and women at work, war-games of children, mock-fights of adults, domestic and cooking operations, games of adults and children, stages of pottery-making, etc. Phonograph records include flute-song, drum-language, dances, etc. The remarkable greenstone figure is reproduced on p. 137.

Raymund (P.) Die Faden- und Abnehmespiele auf Palau. (Anthropos, St. Gabriel-Mödling bei Wien, 1911, VI, 40-61, 10 pls., 86 fgs.) Briefly describes with names and reproductions 76 (and a number of sub-varieties) string-figures, etc., known among the children of the Pelew Is. natives as *chalidebáol*, i. e. "gift of the *chalid* (spirits or higher beings)." Nos. 1-12 are played by two people, the rest by one. Tales go with these games. Among the figures are: house, tortoise, crab, various fruits, stars, clouds, fishes, flies, souls, baskets, various birds, women and men at work, sun, plantation, birds in nest, war, peace, etc. In a number of these figures several things are represented at once.

Reiber (J.) Kinderspiele in Deutsch-Neuguinea. (Baessler-Archiv, Lpzg. n. Berlin, 1911, I, 227-256.) Describes briefly 113 plays and games of children (target and shooting games, war-games, 7; bathing games, 17; animal-games, 21; hunting-games, 16; planting-games, 4; dance-games, 5; hopping and jumping-games, 10; catching-games, 4; ball-games, 3; throwing and hurling-games, 2; guessing-games, 3; musical and noise-games, 4; fire-games, 6; miscellaneous, 11) among the natives of German New Guinea. Of these 113 games 31 are common to all the tribes con-

cerned; the others are distributed as follows: Tumleo 43, Juo 54, Momoken 46, Poyek 45, Zaire 41, Murik 73, Monumbo 65, Zepa 55, Mibât 58. The richness of animal-plays is noteworthy, scarcely any important animal is omitted (the significance of animals for the natives and a deep nature-feeling account for this). Many hunting games are merely imitations of the hunt, e. g., in Mibât. Planting-games which are very common and much liked are not so much in vogue as animal and hunting-games. The dance-games are not numerous (almost all have songs) but the children are very fond of them. The fire-games result from the high respect in which fire is held among these tribes. The games in the sand and water offer many points of contact with those of European children at the seashore. The children have a marked tendency to invent new games (one invented in 1906 is noted on p. 253). Genuine girls' games are very rare (even domestic, or household ones). Games of adults seem unknown, but they sometimes participate in those of the children. Most games belong to certain seasons, months, etc. Evening (a moonlight night is ideal) is the preferred time for play.

Schlaginhausen (O.) Über Siedlungsverhältnisse in Süd-Neumecklenburg. (Z. f. Ethnol., Berlin, 1910, XLII, 822-829, 3 fgs.) Treats of the form of dwellings and their grouping in villages at Tamm in the Mullama district of New Mecklenburg, observed at three different intervals. The typical hut is oval, but rectangular also occur. The dwelling-houses are one for each family. There are also cooking-houses, "men's houses," storehouses, boat-houses, etc. Nearby is the grave-yard. Considerable changes sometimes take place within a short time.

Schmidt (W.) Die tasmanischen Worte zur Bezeichnung archäolithischer Werkzeuge. (Ibid., 915-919.) Discusses the etymologies of Noetling (see *Amer. Anthropol.*, 1909, N. S., XI, 784) for Tasmanian words denoting archæoliths implements. Father S. is not willing to believe that the Tasmanian language had only one designa-

tion for all varieties of stone. Complete knowledge of the language would probably reveal other special words.

Smith (H. W.) Notes on Tahiti. (Nat. Geogr. Mag., Wash., 1911, XXII, 947-963, 17 fgs.) Some of the illustrations (fishing, fruit-carrying, native house, pig-roasting) are of ethnological interest. A few notes on the natives, food, torchlight fishing, cooking, houses, tree-climbing, etc.

Speiser (F.) Mitteilungen von den Neuen Hebriden. (Z. f. Ethnol., Berlin, 1911, XLIII, 307-308.) Under date of March 8, 1911, Dr S. reports collections of skulls and osteological material, photographs, measurements, etc., from Espiritu Santo and Big Bay. The people who make the feathered arrows live in the mountains of West Santo; they also possess pottery. Polynesian mixtures are to be met with on the coast.

Strong (W. M.) Note on the Tate language of British New Guinea. (Man, Lond., 1911, XI, 178-181.) Vocabulary of some 160 words. The language seems to be "Papuan, but quite distinct from the Elema, Namau, and Bamu groups of Papuan dialects, and also from the Papuan languages of German New Guinea."

Walden (E.) Die ethnographischen und sprachlichen Verhältnisse im nördlichen Teile Neu-Mecklenburgs und auf den umliegenden Inseln. (Korr.-Bl. d. D. Ges. f. Anthr., Hamburg, 1911, XLII, 28-31.) Notes on ethnography and linguistics of northern New Mecklenburg and the surrounding islands (author was in the Bismarck Archipelago more than two years). There are 3 culture-zones in this region: that of central New Mecklenburg about Panakondo and in Tabar; that of northern New Mecklenburg, best represented within Fesoa-Lauan linguistic group; and that of New Hanover.

Wallis (W. D.) Australian marriage classes. (Man, Lond., 1911, XI, 36-38.) Critique of views of Rev. J. Mathew, as to origin of Australian marriage classes, from two phratries representing "two ancient, distinct races, which amalgamated to form

the Australian race,"—class exogamy founded on race-exogamy. See Lang (A.).

Wendler (J.) Zur Feuer- und Nahrungsbereitung der Marshallinsulaner, Südsee. (Baessler-Archiv, Lpzg. u. Berlin, 1911, I, 269-276.) Describes fire-making (rubbing; twirling method of Truck Is. in Carolines, not known); "oven" or cooking-hearth; preparation of arrow-root flour in detail (pp. 270-272); preparation of the *mogan*, a "national dish" made from the *pandanus* fruit.

Williamson (R. W.) Solomon Island notes. (Man, Lond., 1911, XI, 65-68, 1 pl.) Treats of taboo-signs (representations of crocodile, half shell stuck in tree, bundles of leaves or plants in end of split sticks) in palm-grove; fear of ghost; superstitious village desertion; food sacrifice, etc. The people concerned are the primitive natives of the Rubiana Lagoon (New Georgia) and of the island of Kulambangra near Gizo.

Wiszwianski (H.) Les îles Palau. (Bull. Soc. Neuchât. de Géogr., Neuchâtel, 1910, XX, 467-489, map.) Contains (pp. 483-488) some notes on the Pelew natives (who are fast disappearing), taken from the work of Kubary.

Woodford (C. M.) Note on bone spear-heads from the New Georgia group, British Solomon Islands. (Man, Lond., 1911, XI, 120-122, 2 fgs.) Describes and figures two spear-heads, made from human femurs and mounted on wooden shafts, discovered on the site of a very old burying-place. They are said to be "of most unusual and hitherto unknown shape."

Worcester (D. C.) Field sports among the wild men of Northern Luzon. (Nat. Geogr. Mag., Wash., 1911, XXII, 215-267, 53 fgs.) Treats of fermented drinks, keeping the head-hunters in good humor, the bird-dance of the Benguet-Lepanto Igorots, wild dances of Bontoc, wrestling, Bontoc slapping-game, foot-races, greased-pole contest, tug-of-war, nose-flute, Ifugao dances, etc. Some of these games and sports have been introduced by the Americans.

AMERICA

Abel (A. H.) The Indians in the Civil War. (Amer. Histor. Rev., N. Y., 1910, XV, 281-296.) There were divisions among the Indians of the Indian Territory, etc.—the Comanches, Seminoles, and Creeks split into two factions. Sometimes a single tribe went for the South. The Choctaws were pro-slavery and the Chickasaws went over to the South.

Activities of the Anthropological Department of the Field Museum of Natural History. (Amer. Anthropol., Lancaster, Pa., 1911, N. S., XIII, 168-169.)

Adan (E.) Las danzas de Coatepec. (An. Mus. Nac. de Arqueol., México, 1910-1911, II, 133-194, 7 pls.) Treats of the dances held at Coatepec in the Tetecala district of the State of Morelos in connection with the festival of the Virgin of Candelaria, the last Sunday of January, on the shore of the lake of Coatepec. There are several dances by children from 7 to 15 years of age, having no recitative or dramatic element. The "Los Vaqueros" dance (music and texts of the three parts are given on pages 144-177) is a dramatic piece treating of the customs, etc., of the Indian *vaqueros*. On pages 177-183 are given music and text of a briefer dramatic dance, "Los Moros," concerned with the struggle between the Moors and the Christians and the victory of the latter. The dramatic dance, called "Los Tecuanes" (pp. 183-190) is given in mixed Aztec and Spanish. On pages 191-194 the author compares these modern dances with those of the ancient Aztecs, of which they are "degenerations," but of which they have preserved many interesting features. These Indians, now very mixed, are the descendants of the Aztec tribe of the Tlaluicas. The Virgin of Candelaria is looked upon as the titular divinity of the lake, and festivals are held to prevent it drying up.

Allen (A. R.) Hospital management and the training of Indian girls as nurses. (Red Man, Carlisle, Pa., 1911, IV, 54-72.) Gives results of hospital-management and nurse-training at Carlisle Indian School. Since

Feb., 1911, monthly weighings of individual pupils have been in vogue. Physical examinations are made with records on card-index. Indian girls make successful nurses.

Barnard (W. C.) A rare Missouri flint. (Amer. Anthropol., Lancaster, Pa., 1911, N. S., XIII, 172-173, 1 fg.)

Barnett (A.) Étude sur le mode de fabrication des frondes péruviennes antiques. (J. Soc. d. Amér. de Paris, 1910 [1911], N. S., VII, 117-119.) Treats briefly of the method of manufacture of bandages from the Incasic tombs of Peru. Mme B. has made a specialty of the study of ancient Peruvian fabrics and tissues.

Barry (P.) The ballad of the Broomfield Hill. (J. Amer. Folk-Lore, Lancaster, Pa., 1911, XXIV, 14-15.)

Beauchamp (W. M.) The Pompey stone. (Amer. Antiq., Benton Harb., Mich., 1911, XXXIII, 7-11, 1 fg.) Interesting account of the history of an inscribed stone, purporting to date from 1520, "found" in the town of Pompey in 1820. The evidence gathered by Dr B. proves it to have been a "plant" of quite an ordinary sort. The stone is still in Albany.

Bebeau (G.) The origin of thunder. (Red Man, Carlisle, Pa., 1911, III, 340.) Brief legend of northern Minnesota Chippewa that, whenever it thunders, three Indians, who went up into the clouds, are hunting in "the happy hunting-grounds."

Belmar (F.) Sistema silábico en las lenguas de la familia Mixteco-Zapoteca-Otomí. (An. Mus. Nac. de Arqueol., México, 1910-1911, II, 264-271.) Treats of the syllabic system of Chatino, Chinantec, Papabuco, Amuzgo, Mixtec, Cuicatec, Mazatec, Popoloca, Otomí. These languages all present only apparent monosyllabism and Najera is wrong in thinking that real monosyllabism is their chief characteristic. No one of the tongues of the group in question can be said to be truly a "monosyllabic" or "isolating" language. Monosyllabism here is largely due to shortening.

Beuchat (H.) et Rivet (P.) La famille betoya ou tucano. (Mém. Soc. de Ling. de Paris, 1911, XVII, 117-164.) Treats of the Betyan (Tucano) family, with bibliography, comparative vocabulary, grammatical

sketches, and texts. The authors recognize a western, a northern, and an eastern group,—tribal lists for each are given (pp. 3-14). For the western group vocabularies (Tama, Correguaje, Proje, Encabellado, and Icacuate), texts (*Pater Noster* from Brinton and Teza; Sign of the Cross, *Pater Noster*, *Ave Maria*, *Credo*, and Christian Doctrine, from Gonzalez Suarez), and grammatical sketch, with additions to Brinton; the northern group is represented by the brief Betya vocabulary of Hervas and the *Pater Noster* of Adelung,—to which are added (after F. Müller) some grammatical notes. On pages 42-48 the authors discuss the possible relationship of the Betyan with other stocks, especially the Chibchan, and find evidence enough to convince them that the language called *Betya* (hitherto considered the northern representative of the stock) should be classed as Chibchan, thus removing it from the so-called Betyan stock altogether. For the western and eastern groups (Tucano, etc.),—the last have been recently studied by Koch-Grünberg, the name "Tucano family" is suggested (p. 164).

— Affinités des langues du sud de la Colombie et du nord de l'Équateur. Groupes Paniquita, Coconuco et Barbacoa. (Muséon, Louvain, 1910. Extr. 1-94.) Discusses the grammatical and lexicological relationships of the Paniquitan, Coconucan, and Barbacoan languages with one another and with Chibchan. At pp. 9-20 is a comparative vocabulary of Barbacoan, Paniquitan, and Coconucan; at pp. 45-60 a comparative vocabulary of Barbacoan-Coconucan-Paniquitan and Chibchan (grammatical resemblances with Chibchan are considered at pp. 61-86). Resemblances with Quichuan, Chococoan, etc., are also discussed. The authors are of opinion that the Paniquitan, Coconucan, and Barbacoan tongues belong to the Chibchan stock,—the Barbacoan going with the Talamanca and related group, the Paniquitan and Coconucan forming another group together. The most developed languages of the Chibchan stock are the Chibcha and Paez; among the most primitive is the Colorado, which

has "an astonishing resemblance to the Talamanca."

Beyer (H.) Existe en el Códice Fejérváry-Mayer un representación de Huitzilopochtli? (An. Mus. Nac. de Arqueol., Méx., 1911, II, 531-536, 2 fgs.) B. argues that the blue figure on page 25 of this Codex is not, as Professor Seler contends, the god Huitzilopochtli, but the black and red Tetzcatlipoca.

— La astronomía de los antiguos mexicanos. (Ibid., 1910-1911, II, 221-243, 1 pl., 17 fgs.) Treats of ancient Mexican astronomy: The constellations and the Aztec calendar; sun, its symbolic animals, etc.; the moon; the planets (Venus, Earth), the Milky Way, comets, etc. The deities referring to these are also considered.

— Das Auge in der alt-mexikanischen Symbolik. (Arch. f. Anthrop., Brnschw., 1911, N. F. X, 39-42, 27 fgs.) Treats of the eye in ancient Mexican symbolism (the various Codices, etc.). The eye appears as a star; conventionalized eyes as hair and breast ornaments, etc.; eye represents death and night so closely related to it; west is represented by the star-eye, being the region of night; "eye of darkness" found elsewhere in connection with the gods; eye as light or fire, also life, and *chalchiuhtl*.

— Der 28tägige Monat der alten Mexikaner. (Mitt. d. Anthr. Ges. in Wien, 1910, XL, 238-248.) Cites from the *Popul Vuh*, the Codex Borgia, etc., evidence that the ancient Mexicans and Mayas possessed a month of 28 days.

Bingham (H.) The ruins of Choquequirau. (Amer. Anthrop., Lancaster, Pa., 1910, N. S., XII, 505-525, 4 pls., 3 fgs., 2 maps).

Bistrup (A.) Eskimo women in Greenland. (Century Mag., N. Y., 1911, LXXXII, 668-674, 4 fgs.) Treats of child-life, houses and furniture, labor and work of women (preparations of seal-skins, covering kayaks and women's boats, tent-building), summer and winter life, physical and mental characters, dress and ornament, death, etc. Author is wife of the Danish Governor of Greenland.

Blanchard (R.) Encore sur les tab-

leaux de métissage de Mexique. (J. Soc. d. Amér. de Paris, 1910 [1911], N. S., VII, 37-60, 9 pls., 5 fgs.) B. continues his interesting and valuable discussion of the *métissage*-pictures in the Museum of Mexico and of the terms applied to the representatives of the various mixtures of white with Indian and negro or both. In the Mexican Museum are a series of paintings of "castas de Mexico, época colonial," and a large canvas in 16 compartments, dealing with the like subject; in the Paris Museum are other paintings, which, with those of the Mexican Museum, are probably due to Ignacio de Castro, by whom the large canvas was hardly executed. The list of degrees of *métissage* is discussed with some detail by Dr B., with references to the work of J. J. Virey, *Hist. Nat. du Genre humain* (Paris, au IX; 2e éd., 1824), in which a list is given; and to the section on *mestizos* (table of "castas" given) in A. L. Herrera and R. E. Cicero's *Catálogo de la Colección de Antropología del Museo Nacional* (Mexico, 1895). In the Museum of Madrid are likewise 18 pictures (from Peru) relating to these *métissage* (one is reproduced on p. 57). The 16 paintings and the one large canvas in the Mexican Museum are reproduced in this article. Dr B. concludes that there is a great lack of precision about some of the terms used to denote degrees of *métissage*. The word *chino*, e. g., "does not mean the same thing at the Paris Museum, in Mexico, at the Madrid Museum, and . . . in China."

Boas (F.) Ethnological problems in Canada. (J. Roy. Anthr. Inst., Lond., 1910, XL, 529-539.) Supplements paper of 1906 with similar title. Intensive study is needed for the interior of Labrador, the eastern part of the Mackenzie Basin, the northern interior of British Columbia, the Kootenay valley, and southern and western Vancouver Id. Dr Boas believes that the Iroquoian stock is of southern, not northern origin, and does not belong to "the northern marginal area." Athapaskan adaptability he ascribes to lack of intensity of culture rather than to race.

Bradley (W. W.) Some Mexican

- transportation scenes. (Nat. Geogr. Mag., Wash., 1910, XXI, 985-991, 10 figs.) Some of the illustrations (ancient Mexican method of hoisting ore in mines, etc.) are of ethnologic interest.
- Brant-Sero** (J. O.) O-nō-dah. (J. Amer. Folk-Lore, N. Y., 1911, XXIV, 251.)
- Breton** (A. C.) Sixteenth International Congress of Americanists. (Man, Lond., 1911, XI, 69-74.) Gives brief résumés of principal papers read at Vienna in 1910.
- Some American Museums. (Ibid., 97-100, 1 pl., 1 fig.) Treats briefly of American Museum of Natural History (N. Y.), Brooklyn Institute, Peabody Museum (Cambridge), Yale University Museum, Academy of Sciences and University of Pennsylvania (Philadelphia), National Museum (Washington), Costa Rica National Museum (San José). The illustrations relate to painted pottery from Costa Rica.
- Bringas** (R. A.) Cuauhtémoc. Su nacimiento y su educación. (An. Mus. Nac. de Arqueol., México, 1910-1911, II, 285-312, 1 fig.) Treats of the birth and education of Cuauhtémoc, son of Montezuma II, born in 1502, and the state of Mexico and the time.
- Bushnell** (D. I., Jr) Myths of the Louisiana Choctaw. (Amer. Anthrop., Lancaster, Pa., 1910, N. S., XII, 526-535.)
- New England names. (Ibid., 235-238.)
- Carter** (C.) How the Nez Percés trained for long distance running. (Red Man, Carlisle, Pa., 1911, IV, 15-16.) Training began in October, —cold baths, warm baths (or sweat baths) with plunges into cold water, light dinner, clinging test, short runs, then longer runs, running up hill, etc.
- Christmas among the Nez Percés. (Ibid., III, 252-254.) Describes ceremonies of Nez Percés of northern Idaho (annual *Tukyawa* dance, war-dance, etc.).
- Chamberlain** (A. F.) Über die Bedeutungen von "amerikanisch," "Amerikaner" usw. (Globus, Brunschwg., 1910, XCVIII, 341-343.) Discusses the various meanings of the term *American* in English and other languages.
- The Uru: a new South American linguistic stock. (Amer. Anthrop., Lancaster, Pa., 1910, N. S., XII, 417-424.)
- The present state of our knowledge concerning the three linguistic stocks of the region of Tierra del Fuego, South America. (Ibid., 1911, XIII, 89-98.)
- David Boyle. (Ibid., 159-164.)
- Sur quelques familles linguistiques peu connues ou presque inconnues de l'Amérique du Sud. Étude d'orientation linguistique. (J. Soc. d. Amér. de Paris, 1910 [1911], N. S., VII, 179-202.) Treats briefly with bibliographies and distribution-map of 42 minor stocks: Apolista, Arda, Cañari, Canichaná, Cayubába, Chango, Chapacura, Chavanté, Cholona, Churoya, Corabéca, Covaréca, Curavéca, Curucanéca, Curuminaca, Hypurina, Ité, Itonama, Itucalé, Juri, Léca, Lorenzo, Mocoa, Moséténe, Móvima, Mura, Ocorona, Otomaca, Otuqué, Péba, Piaroa, Puinavi, Puquina, Saliva, Sanavirona, Ticuna, Timote, Trumai, Uro, Yahua, Yurura, Yuracaré.
- Recent literature on the South American "Amazons." (J. Amer. Folk-Lore, Lancaster, Pa., 1911, XXIV, 16-20.)
- Chamberlin** (R. V.) The ethno-botany of the Gosiute Indians. (Mem. Amer. Anthropol. Ass., Lancaster, Pa., 1911, II, 329-405.) After account of Gosiute environment (formerly all of the generally desert territory bordering Great Salt Lake on the south and extending westward into eastern Nevada), vegetal products used as food, beverages, chewing-gums, smoking, domestic objects, habitations, medicinal plants, and some features of word-formation in the Gosiute language, the author gives a list of plants according to scientific names, with popular and Gosiute equivalents (pp. 360-384); also (pp. 385-405) a list according to Gosiute names, with scientific and popular equivalents.
- Chapman** (J. W.) The Indian of the Yukon; his helps and his hindrances. (Red Man, Carlisle, Pa., 1911, III, 446-449.) Notes bad effects of contact with "civilization." Advocates compulsory education and thinks that

- criminal legislation "should take account of the fact that he is clannish, and extremely sensitive to the sentiment of the community in which he lives." The Yukon Indians "are a race well worth preserving."
- Clark (A. B.)** The Indians of Rosebud. (So. Wkmn., Hampton, Va., 1911, XL, 42-45.) Notes on progress of Siouan Indians of Rosebud Agency. These Dakotas are becoming "regenerated Americans." Mr C. does not favor mixed marriages.
- Cloud (B.)** How the Great Spirit taught the Dakotas to pray. (Carlisle Arrow, Carlisle, Pa., 1911, VIII, no. 12, 4.) Tale of young man, whom mud-turtle (changed into Indian warrior) told to fast and commune with Great Spirit. He then received from a beautiful Indian maiden a medicine bundle, in which was the peace pipe.
- Collins (G. N.) and Boyle (C. B.)** Notes on Southern Mexico. (Nat. Geogr. Mag., Wash., 1911, XXII, 301-320, 17 fgs.) Contains some notes on Indians, etc. Some of the illustrations (mat-weaving, cotton-loom, market-scene, etc.) are of ethnologic interest.
- Crampton (H. E.)** British Guiana and Brazil to Mount Roraima. (Amer. Museum J., N. Y., 1911, XI, 283-293, 12 fgs.) Some of the illustrations are of Ackawois Indians.
- Crow tobacco dance (The).** (Carlisle Arrow, Carlisle, Pa., 1911, VIII, no. 9, 8.) Brief account by Dr R. H. Lowie, reprinted from the *N. Y. Times*.
- Currier (C. W.)** Seventeenth International Congress of Americanists. First Session—Buenos Aires. (Amer. Anthropol., Lancaster, Pa., 1910, N. S., XII, 595-599.)
- Denison (T. S.)** Aryan origin of the Aztecs. (Rec. of Past, Wash., 1911, X, 229-231.) Author believes that he is "able to say beyond the possibility of mistake that Nautatl, the language of the Aztecs, is Aryan and very closely allied to Sanskrit," and that the Aztecs came from western Asia, etc. Examples of correspondences are given,—the *poch* of *Uitsilopochtli*, e. g., is identified with Persian *baga*, Russian *bog*, "God." In several works published from 1907 to 1911, Mr D. has elaborated this impossible theory.
- Diguet (L.)** Le mais et le maguey chez les anciennes populations du Mexique. (J. Soc. d. Amér. de Paris, N. S., VII, 1910 [1911], 5-35, 2 pls., 7 fgs.) Treats of maize and maguey among the ancient Mexican peoples: Terminology (list of names of plants, parts, products, etc., with etymologies), uses (list of foods, drinks, etc.,—*pulque* in particular and *mezcal*), titular divinities of maize (the goddess Centeotl, the Mexican Ceres, and her various names) and *maguey* (Tezcatzoncatl and the other divinities relating to *pulque*), bibliography. The products of maize and its utilization among the ancient Mexicans figured much less in their domestic economy than did those of the maguey plant, which Acosta termed *Arbol de las Maravillas*.
- Dimock (J. A.)** A despoiled people. (Outlook, N. Y., 1911, Vol. xcvi, 201-206, 5 fgs.) Treats of present conditions of the 300 Seminoles in the Everglades and Big Cypress Swamp in Florida. According to the author, "little stands between the Seminole and starvation but the few remaining alligators." A reservation ought to be decreed for them.
- Donehoo (G. P.)** Carlisle and the red men of other days. (Red Man, Carlisle, Pa., 1911, III, 429-445, 8 fgs.) Treats of the conflicts and councils held at Carlisle in 1753, 1756, 1763, etc.
- The soul of the red man. A study. (Ibid., 317-322.) General reflections on Indians past and present.
- Dunn (J. P.)** The preservation of Indian names and languages. (Ibid., 333-336.) Argues for preservation,—"Indian languages are becoming extinct much more rapidly than the Indians themselves," through the Americanization of the younger Indians (e. g. the Miami). Etymology of *Wabash* (p. 335) from Miami *wahpashikiki*, an inflected form of the adjective "white," implying that "the noun it qualifies stands for something that is bright or pure white, inanimate and natural, such as a stone or a shell."
- DuPuis (L.)** The creation of man.

- (Carlisle Arrow, Carlisle, Pa., 1911, VII, no. 34, 1.) Brief Sac and Fox legend of Ketchi-manito and Matchi-manito.
- Eastman** (C. A.) Life and handicraft of the northern Ojibways. (So. Wkmn., Hampton, Va., 1911, XL, 273-278, 4 fgs.) Notes on fishing and hunting, use of birch-bark, wild-rice harvesting, net-making, canoes, skin-dressing, utensils, etc., of the Ojibwa of Lake of the Woods, Rainy Lake, etc.
- A canoe-trip among the northern Ojibways. (Red Man, Carlisle, Pa., 1911, III, 236-244, 6 fgs.) Notes on trip in summer of 1910 to Indians of Leech Lake, Bear Island, Red Lake, etc., in the region between Lake Superior and the Lake of the Woods.
- Eigenmann** (C. H.) Notes from a naturalist's experiences in British Guiana. (Nat. Geogr. Mag., Wash., 1911, XXII, 859-870, 8 fgs.) Abstracted from the author's *The Fresh Water Fishes of British Guiana* (Carnegie Mus. Mem., Vol. V). Contains some notes on Indians of the country (fish-fences, poisoning, etc.).
- Ellis** (E. W.) The raccoon and the opossum. (Red Man, Carlisle, Pa., 1911, III, 344.) Brief Sac and Fox tale of origin of the opossum's "smile."
- Emmons** (G. T.) Native account of the meeting between La Pérouse and the Tlingit. (Amer. Anthropol., Lancaster, Pa., 1911, N. S., XIII, 294-298, 1 fg.)
- The potlatch of the North Pacific Coast. (Amer. Mus. J., N. Y., 1910, X, 229-234, 6 fgs.) Notes on potlatch of Tlingit, a complex observance developed probably out of "a simple feast for the dead in primitive days."
- Engerrand** (J.) Informe sobre una excursión prehistórica en el Estado de Yucatán. (An. Mus. Nac. de Arqueol., México, 1910-1911, II, 245-259.) Gives results of a geological study of certain regions of Yucatan. No remains of "fossil man" were discovered. During the quaternary most of the region in question was covered by the sea.
- Ettawageshik** (E.) The formation of gold. (Red Man, Carlisle, Pa., 1911, IV, 27.) Very brief Ottawa legend ascribing the origin of gold to the yellow leaves of autumn blown about by the winds after the deluge.
- Fassett** (E. C. B.) The new mural paintings and the industries they portray. (Amer. Mus. J., N. Y., 1911, XI, 130-137, 5 fgs.) Describes the first four of a series of mural paintings by Will S. Taylor: Weaving a Chilkat blanket, Steaming and decorating a Haida canoe, Tsimshians making *eulachon* butter, and A Bella Coola family making "bread."
- Fewkes** (J. W.) The butterfly in Hopi myth and ritual. (Amer. Anthropol., Lancaster, Pa., 1910, N. S., XII, 576-594, 1 pl., 3 fgs.)
- Note on the occurrence of adobes in cliff-dwellings. (Ibid., 434-436, 2 pls.)
- Fish design** on Peruvian mummy cloth. (Amer. Mus. J., N. Y., 1910, X, 251-254, 4 fgs.) Résumé article of C. W. Mead in *Putnam Anniversary Volume*.
- Flores** (M.) Juegos de bolitas. (Rev. de Folk-Lore Chileno, Santiago, 1911, II, 63-110, 31 fgs.) Detailed description, with explanations of all technical terms, of the games of *bolitas* (marbles) as played by children in the city of Los Angeles, Province of Biobío, between 1890 and 1893; also the game of *pallalla* (a girls' game chiefly,—a sort of "jackstones") as played in Santiago and Los Angeles.
- Friday** (M.) Ancient customs of Arapahoes. (Carlisle Arrow, Carlisle, Pa., 1911, VII, no. 39, 4.) Notes on errors concerning the Arapaho, Sundance, etc.
- Friedemann** (M.) Vorlage eines Gipsabgusses des Schädeldaches von *Diprthomo platensis* Ameghino. (Z. f. Ethnol., Berlin, 1910, XLII, 929-938, 5 fgs.) Treats of the *Diprthomo platensis* Ameghino in connection with a plaster-cast of the cranial vault. F. thinks the *D. plat.* does not depart far enough from recent man to justify the contentions of Ameghino. Dr v. Luscham believes that Ameghino's *Diprthomo*, rightly oriented, "differs in no way from the normal average European of our time." Pendants of the *Diprthomo* skull could be found in any great collection of crania in Europe. The cranial resemblances of man and the small monkeys (*Midas*, *Chrysothrix*,

- Kallothrix*, etc.), Dr v. L. thinks, are external and superficial.
- Friedmann (M.)** Dallin's statue, "The Appeal to the Great Spirit." (Red Man, Carlisle, Pa., 1911, iv, 25-26.) This statue "epitomizes what the artist has tried to show is the 'lost cause' of the red man."
- Gabriel (C.)** The fiestas of the Serrano Indians. (Ibid., 254-255.) Brief notes on fiestas (singing, dancing, peon-playing, dolls for the dead), on the Protero Reservation in Southern California.
- Stories of the Serrano. (Ibid., 1911, iv, 82.) Folklore concerning bear, eagle, horn-toad.
- Galloway (A. C.)** An interesting visit to the ancient pyramids of San Juan Teotihuacan. (Nat. Geogr. Mag., Wash., 1910, xxi, 1041-1049, 8 fgs., map.) Treats briefly of the pyramids "El Sol" and "La Luna," etc. Most of the illustrations do not relate to the pyramids.
- Gamio (M.)** Los monumentos arqueológicos de las inmediaciones de Chalchihuites, Zacatecas. (An. Mus. Nac. de Arqueol., México, 1911, ii, 467-492, 8 pls., 5 plans.) Gives results of 3 months' expedition in 1908 to the ruins of near Chalchihuites. Natural and artificial caves; fortifications (on the Cerro de El Chapin) and other grouped and isolated structures; the hall of columns and other buildings at Alta Vista; the objects discovered, —a human skull, trepanned during life, pottery of two types, mosaic ornaments, fragments of turquoise, etc., stone hatchets, sea-shells, stone objects of various sorts. The buildings of Alta Vista are unornamented, but many of the specimens found are profusely ornamented. According to Sr G., the ruins of Alta Vista are closely related to those of La Quemada, etc. They also "constitute the northern limit of structures with distinctive architectonic features (stairs, columns, etc.), whose relations are with the buildings of Central, South and Southeastern Mexico." In other words, "they form a real transition between the North and the South"—influences of "Pueblo" culture are recognizable.
- Gann (T. W.)** Exploration carried on in British Honduras during 1908-9. (Ann. Arch. & Anthr., Liverpool, 1911, iv, 72-87, 3 pls.) Gives results of excavations of large and small mounds at Saltillo, Douglas, Moho Cay, Boston, Corozal, Benque Viejo, Patchacan, Sarteneja, San Estevan, Consejo, Chetumal Bay, etc. The pottery inclusarios, etc., of Saltillo closely resemble those found in the valleys of the Usumacinta and Rio de la Passion. Three kinds of burial seem to have been practiced (from poorest class to priests and chiefs, etc.,—the grave-gifts increasing in number and in value). On Wild Cane Cay a copper ornament ("if not a head of Christ, undoubtedly a Christian symbol"), indicating Spanish influence, was found. At Boston was located a principal center for the manufacture of stone implements and weapons. Sarteneja was the site of a considerable pottery manufactory, several small mounds there being composed entirely of potsherds. Near Morales was found a "Santo," or Indian idol of stone.
- Geddes (J., Jr.)** Canadian-French, 1908. (Roman. Jahresb., Erlangen, 1911, xi, 280-343.) Bibliography of Canadian-French for 1908, with entries 1285-1534 covering: Biography, education, French production, the Champlain tercentenary, history and geography, language (pp. 311-313), literary, science, travels, periodical literature, writings in English dealing with French Canada (pp. 332-343.) *Oka*, cited on p. 329 as an Iroquois name, is rather Algonkian.
- Gerard (W. R.)** Kalamazoo. (Amer. Anthropol., Lancaster, Pa., 1911, N. S., xiii, 337-338.)
- Gilfillan (J. A.)** The evils of annuities to Indians. (Red Man, Carlisle, Pa., 1911, iii, 323-332.) Argues for giving the Indian and half-blood "a chance to be men."
- Gordon (G. B.)** A trip to Chichen Itza. (U. of Penn. Mus. J., Phila., 1911, ii, 10-21, 8 fgs.) Notes on visit in summer of 1910. Of the Mayas Dr G. observes, "living among the ruined palaces of their ancestors, they retain in their humble way many marked attributes of a cultivated people." Chichen Itza "awaits excavation to bring it into line with the other cities of the ancient world."

- Gould (I. R.) Customs of the Alaskans. (Carlisle Arrow, Carlisle, Pa., 1911, VIII, No. 4, 1.) Items from old man of Unga on houses (barabaras), courage-test, manner of sleeping and telling when it was morning.
- Grenfell (W.) The Labrador fishermen. (So. Wkmn., Hampton, Va., 1911, XL, 617-623, 5 fgs.) Notes (p. 622) introduction of reindeer. Today "there are practically no Eskimo south of Hamilton Inlet, but north of that there are about 1,500" (p. 617).
- Grinnell (G. B.) The great mysteries of the Cheyenne. (Amer. Anthropol., Lancaster, Pa., 1910, N. S., XII, 542-575, 2 fgs.)
- Hagar (S.) The four seasons of the Mexican ritual of infancy. (Ibid., 1911, N. S., XIII, 229-234, 5 fgs.)
- von Hansemann (D.) Ein syphilitischer Schädel aus Südamerika. (Ztschr. f. Ethnol., Berlin, 1911, XLIII, 128-130, 1 fg.) Discusses a pre-Columbian skull (now in the Museum für Völkerkunde) from Salta in the Calchaqui valleys of Argentina, which the author thinks bears on the frontal bone, etc., clear indications of syphilitic disease. Certain injuries to the nose point to subsequent lupus also.
- Harrington (J. P.) The phonetic system of the Ute language. (Univ. of Colo. Stud., Boulder, 1911, VIII, 199-222.) Lists vowels and consonants of the Mogauche and Capote dialect of the Southern Utes, with numerous word lists exemplifying their uses. Striking instances of modification of sound by sound are noted. Ute has "a voiceless counterpart of every voiced sound." There is no coming together of consonants. Ute speech "is composed of syllables of apparently practically equal length, which each consists either of a vowel only, or of a consonant plus a vowel."
- A key to the Navaho orthography employed by the Franciscan Fathers. (Amer. Anthropol., Lancaster, Pa., 1911, N. S., XIII, 164-165.)
- The numerals "two" and "three" in certain Indian languages of the Southwest. (Ibid., 167-168.)
- The origin of the names Ute and Paiute. (Ibid., 172-173.)
- A brief description of the Tewa language. (Ibid., 1910, N. S., XII, 497-504.)
- Hartman (C. V.) Le calebassier de l'Amérique tropicale. (J. Soc. d. Amér. de Paris, 1910 [1911], N. S., VII, 133-145, 4 pls., 1 fg.) Ethnobotanical study of the calabash-tree (*Crescentia cujete*) of tropical America,—Costa Rica, Nicaragua, Salvador, Mexico, etc. The use and ornamentation of the fruit are described, and, on pp. 13-15, is given (French text only) an Aztec legend of the origin of this tree.
- Henning (P.) Apuntes etnográficos sobre los otomíes del Distrito de Lerma. (An. d. Mus. Nac. de Arq., Hist. y Etnol., México, 1911, III, 57-85, 9 pls., 7 fgs.) Gives results of investigation of the Otomi Indians of the district of Lerma, State of Mexico. Situation, name and number (altogether 194,790, of which 55,251 in the State of Mexico), origin and history (Spanish conquest no less cruel than the Mexican), religion (the survival of ancient heathen customs is noted; chapels of San Nicolás Peralta, with veneration of crosses here and at Acapulco; images of the Virgin and Jesus with heathen features, etc.), physical characters, dwellings, food, clothing, education and character, etc. The author is somewhat optimistic as to the possibility of improving these Indians. The great majority still make almost exclusive use of their mother-tongue.
- Hewett (E. L.) Two seasons' work in Guatemala. (Bull. Amer. Arch. Inst., Norwood, Mass., 1911, II, 117-134, 27 pls.) Gives results of investigations of 1910 and 1911 at ruined city of Quirigua. After briefly describing the clearing away of underbrush, trees, etc., the author gives a few notes on previous investigations, the situation and physical conditions. The architectural remains (the residential part,—the houses were probably bamboo huts thatched with palm,—has perished), the sculptures (greater and lesser) are then considered. The greater include the high pedestal group, the low pedestal group, the zoomorphic group, the group without pedestal; the lesser monuments consist of three specimens found near together in the Cere-

monial Plaza. At Quirigua "the perfect chastity of all the sculptures is noteworthy," and there is an "absence of war implements and scenes of combat" as well as also "an entire absence of scenes of sacrifice, cruelty or bloodshed." The figure of the Great Turtle at Quirigua "is undoubtedly the crowning achievement of a native American sculpture, so far as is now known." Stela E. of Mandslay is "the largest shaft in the whole Maya land." In the minor ruins outside of Quirigua proper some interesting discoveries may yet be made.

Highstone (L. S.) The Indian play of Hiawatha. (So. Wkmn., Hampton, Va., 1911, XL, 93-99, 3 fgs.) Brief account of play, based on Longfellow's poem, as given annually by the Ojibwa Indians at Yawaygamug, Michigan,—the Indian village "is built along the shores of a beautiful little inland lake in the very heart of the virgin forest." The theater is a natural one. The play, in Ojibwa, lasts four or five hours.

Hillman (L.) One of the Seneca stories. (Red Man, Carlisle, Pa., 1911, III, 251.) Cites Seneca belief that world will end when work of old woman who mends great canvas (torn by thunder-storms) is finished.

Hill-Tout (C.) Report on the ethnology of the Okanák'ën of British Columbia, an interior division of the Salish stock. (J. R. Anthropol. Inst., Lond., 1911, XLI, 130-161.) Treats of habitat, tribal divisions (formerly 10 permanent villages or settlements), language (brief outlines of grammar, etc., pp. 137-141, with native texts and interlinear translations of 3 legends), early home (migration has been from southeast), contact with whites (effect on lives and conditions; decrease in numbers), religious and mythological ideas (first-fruits ceremonies; prominent rôle of Coyote; "the snow-dance of Coyote," a legend bringing out the Indian ideas of the relation between a man and his personal totem or *snam*, pp. 135-137). Pages 144-161 are occupied with English texts only of 10 myths: Myth of Coyote; the making of the sun; stealing fire from the upper world; how Coyote brought the sal-

mon up the Columbia; skunk and fisher; Coyote, his four sons and the grizzly bear; Coyote and fox; the lazy boy; the grandchildren of the mountain-sheep; fisher and martin.

Hrdlička (A.) Contribution to the anthropology of Central and Smith Sound Eskimo. (Anthrop. Pap. Amer. Mus. Nat. Hist., N. Y., 1910, v, 177-180, 20 pls.) Treats, with details of measurements, etc., of seventeen skulls (9 male, 6 female, 2 children) from Southampton Island and adjacent regions, and of four skulls of Smith Sound Eskimo (who died in New York), with observations of other skeletal parts, measurements, etc. On pages 223-230 are given the details of anthropometric measurements of 6 living Eskimo from Smith Sound (3 men, 1 woman, 1 boy, 1 girl), brought to N. Y. by the Peary Expedition in 1896. Dr H. concludes that "the rarity of pronounced dolichocephaly precludes any considerable recent blood relation with the Eskimo from Labrador or lower Greenland," and also "the Southampton Island and all other Eskimo crania present absolutely no racial affinity with either the diluvial or posterior European crania, and their comparison, except for contrasts, should once for all be abandoned; the kinship of the Eskimo is with Asia and America" (p. 214). Between the Southampton Island and Smith Sound crania was found "an unexpectedly close affinity in all the principal features." This indicates that the Hayes collection of Eskimo skulls needs re-investigation. The measurements of several Eskimo when living and of their skeletons, when dead, enable Dr H. to state that caution is necessary in using, e. g., Manouvrier's tables (based on whites) for calculating the stature from the long bones,—some marked differences are noted. The Southampton Id. Eskimo are now believed to be practically extinct. They were known as Sagdlirmiut, first reported by Capt. Lyon in 1825.

Ingenieros (J.) Sarmiento y Ameghino. (Arch. de Pedag., La Plata, 1911, IX, 203-224.) Comparative study of Sarmiento and Ameghino as men of genius,—men of genius in general, the social function of genius,

morals, faith, imagination, social inadaptation, etc.)

Johnson (F. C.) Reminiscences of Rev. Jacob Johnson, M.A., first pastor Presbyterian Church, Wilkes-Barré, 1772-1790. (Proc. & Coll. Wyom. Hist. & Geol. Soc., Wilkes-Barré, Pa., 1910, II, 103-200, 1 pl.) Contains many references to the Indians (Six Nations, etc.), mission labors (particularly Wheelock's), etc. Rev. J. J. is on record as advocating the teaching of the Indian language in the Wheelock school, believing it to be more important than Latin for the equipment of a missionary." He was a man of some genius.

Jones (W.) Notes on the Fox Indians. (J. Amer. Folk-Lore, N. Y., 1911, XXIV, 209-237.)

ten Kate (H.) Sur quelques peintres-ethnographes dans l'Amérique du Sud. (L'Anthropologie, Paris, 1911, XXII, 13-35, 1 fg.) Treats of Humboldt; E. F. Poeppig, author of *Reise in Chile, Peru und auf dem Amazonenstrom* (2 vols., 1835), the 24 plates of which contain some figures of Indians (Pehuenches, Peruvians, etc.); J. B. Debret, author of *Voyage pittoresque et historique au Brésil* (3 vols., 1834-1839), the illustrations to which contain ethnic types, portraits, figures of ethnographic objects, etc., besides composite pictures and groups,—among the Indians represented are Guaycurus, Botocudos, Puris, Patachos, Macharis, Camacan, Charruas, Guaranis, Juris, Maxurunas, Juripassés, Goyanas, etc., and other plates relate to Portuguese, Creoles and Negroes; J. M. Rugendas, part of whose sketches were published in 1836 in *Das Merkwürdigste aus der malerischen Reise in Brasilien* and later in *Mexico und die Mexicaner; Landschaftsbilder und Skizzen aus dem Volksleben* (1855),—the South American Indians figured in the former are Botocudos, Camacans, Machacalis, Puris, Coroados, Copopos, Araucanians, Peruvians, Pehuenches, Patagonians, etc., and negroes are also represented; P. J. Benoit, author of a *Voyage à Suriname* (1839), containing pictures of Caribs and Bush-Negroes in particular; George Catlin, the South American material in whose *Life among*

the Indians (1861) and *Last Rambles* (1868) hardly entitle him to high rank, and make one question the actuality of his travels in S. A.; A. F. Biard, author of *Deux années au Brésil* (Paris, 1862), in whose pictures the comic and the caricature are too prominent,—the Indians represented are Mundurucus, Araras, Muras, etc., and some of his types were reproduced by Figuier, in his *Les Races humaines*, while some of the larger pictures made by him are in the Museums of Europe (three are also in the Museum of La Plata; F. Keller-Leuzinger, author of *Vom Amazonas und Madeira* (1871; Engl. ed., 1874),—the Indian tribes represented are Muras, Araras, Mundurucus, Parentintins, Caripunas, Moxos, etc.; H. Florence, some 20 of whose pictures of Indians (Mundurucus, Apiacas, Bororos, Guanas, Chamacocos, etc.), have been reproduced by K. v. den Steinen in *Globus* (vol. 75); W. von den Steinen, illustrator (Bakairis, Suyas, etc.), together with J. Gehrts, of the two ethnological works of K. von den Steinen; A. Methfessel, whose albums of sketches, drawings, etc., relating to the Argentine date from 1872-1892; J. F. Villanueva (painter of Araucanian Indians); G. Boggiani, author of *I Ciamacoco and I Caduvei*.

— *Observations au sujet des Recherches anthropologiques sur la Basse-Californie par le Dr P. Rivet*. (Ibid., 37-40, 1 fg.) Reiterates belief in Melanesian element in S. Californian Indians, substantiated by researches of Rivet, also their relationship to the race of Lagoa Santa. The presence of certain tall skeletons among the Pericus may be due to an old Yaqui mixture. See also pp. 374-375.

Kelsey (F. W.) A persistent forgery. (Amer. Antiq., Benton Harbor, Mich., 1911, XXXIII, 26-31.) Treats of the archeological forgeries in Michigan from 1891 on. See the *Amer. Anthrop.*, for 1908; also Starr (F.).

Kennedy (A.) The coming of the new year. (Red Man, Carlisle, Pa., 1911, III, 454.) Notes on observation of New Year by Seneca Indians. The "man who is seen only once during the year," and who questions parents

about the behavior of children recalls the Santa Claus of Europe,—perhaps the Indian custom is of foreign origin.

Keshena (E.) Legend of the catfish. (*Ibid.*, 256.) Menominee story of mark on head of catfish due to hoof of moose, whom their ancestors tried to kill as he came to drink and feed.

— How the hunter punished the snow. (Carlisle Arrow, Carlisle, Pa., 1911, VII, No. 37, 4.) How hunter, who had had his feet frozen by the snow, made winter melt away. Brief legend of the Menominee. Also in *Red Man*, 1911, III, 342-343.

Kinnaman (J. O.) Chippewa history as told by themselves and French documents. (*Amer. Antiq.*, Benton Harbor, Mich., 1911, XXXIII, 32-40.) Treats of the prehistoric struggle with the Hurons, Missions and Missionaries (Father René Menard), etc.

Kinnaman (M. M.) Is Dr Curry right? (*Ibid.*, 24-29, 4 fgs.) Treats of views expressed by Dr E. S. Curry in his *Prehistoric Races of America, etc.*, that the original home of civilization was Tulan, a continent now sunk beneath the Pacific, whence it first went to Asia and thence to America as the "Mound Builders," a white race conquered by the Indians. The author of this article seems to believe that "the oldest prehistoric race in America was Caucasian, and it came from the west over the sea." See also pp. 71-72.

Koch (F. J.) The Riverside Indian School. (*So. Wkmn.*, Hampton, Va., 1911, XL, 219-222, 5 fgs.) Notes success (at present 32 tribes—chiefly Mission Indians—are represented) of Sherman Institute at Riverside, Calif., established in 1901.

Koch-Grünberg (T.) Die Uitoto-Indianer. Weitere Beiträge zu ihrer Sprache . . . nach einer Wörterliste von Hermann Schmidt, Manáos, Brasilien. (*J. Soc. d. Amér. de Paris*, 1910 [1911], N. S., VII, 61-83.) Gives classified vocabulary (2 cols. to page) on pages 62-73, and grammatical notes (pp. 73-83) on pronouns, nouns, verbs. This is a welcome addition to the linguistic material of the little-known Uitoto stock of Northwestern Brazil, espe-

cially as regard morphology and grammar.

— **Aruak-Sprachen Nordwestbrasi-liens und der angrenzenden Gebiete.** (*Mitt. d. Anthr. Ges. in Wien*, 1911, XLI, 33-153, 22 fgs., map.) This first section, besides ethnographic notes (pp. 33-52) on the Arawakan tribes of N. W. Brazil (Baré, Baníwa, Uarakéna, Yavitéro, Karútana, Katapolitani, Siusi, Ipéka, Tariána, Kauiari, Yukúna), etc., contains extensive vocabularies in phonetic transcription (pp. 56-153) of all these languages but Kauiari, from Dr K.'s own material, to which is added a brief word-list of the last from Schmidt. For comparison, words in other vocabularies of a number of these languages, from Wallace, Cou-dreau, Natterer, Schmidt, Tavera-Acosta, Montolieu, Crevaux, Spix, Chaffanjon, Melgarejo, are given. According to Dr K., the whole Caiariy-Uaupés region, now largely peopled by tribes of the Betoyan stock, must, as the river-names suggest, have been once in the possession of Arawakan peoples. Acculturation of the Betoyan tribes from Arawakan sources has also occurred. This monograph adds much to the linguistic data of the region in question.

— **Die Miránya, Rio Yapurá, Amazonas.** (*Z. f. Ethnol.*, Berlin, 1910, XLII, 896-914, 10 fgs.) Brief account, with figures of various ethnic types of the Miránha of the Rio Yapurá. On pages 903-912 are given vocabularies of the Imihitá-Miránya, Fâ-ai, Miranha and Miranha-Oirá-Açu-Tapuya; and on pp. 913-914 some examples of the use of possessive and verbal prefixes. Dr K. was among the Miránya in 1905.

Kroeber (A. L.) Phonetic elements of the Mohave language. (*Univ. Calif. Publ. Amer. Arch. and Ethnol.*, Berkeley, 1911, x, 45-96, 15 pls.) Gives, with indications of lip-positions and numerous tracings, details of Mohave phonetic system,—vowels, labials, interdental, dental-alveolars, alveolar-prepalatals, post-palatals and velars, breaths and glottal stops, stress and pitch accent, etc. According to Dr K., "it is probable that every Mohave stem word, and every syntactical word except those closing

in a few grammatical terminations like *-k*, *-tc*, and *-m*, ends in a vowel." Mohave vowels are all characterized by slight lip movement. Mohave has no labio-dental sounds (*p*, *v*, *m*, and *w* are bilabial). The back-consonants are all stops. A short trilled *r* occurs. There are two *h* sounds. The normal accent in Mohave is heightened pitch rather than increased stress.

— The languages of the coast of California north of San Francisco. (Ibid., 1911, IX, 273-435, map.) Treats of Miwok, Pomo, Yuki, Wiyot, Yurok, Karok,—phonetics, grammar, vocabulary, etc. Numerous examples illustrating morphological and grammatical peculiarities, lists of roots and radicals, vocabularies and texts with interlinear translations are given for each stock. In California, "kindred languages are very similar in structure, however much they differ in a large proportion of their vocabulary." The Costanoan languages are thought to be genetically related to Miwok, the dialects of which are discussed on pages 292-319 (these tongues are without prefixes). Pomo is "completely non-pronominal, that is, non-incorporative." The words of Yuki, with few exceptions "are either monosyllabic or resolvable into monosyllabic stems and suffixes." Yurok and Wiyot have certain close structural resemblances, but few lexical identities are known so far. As Dr K. remarks: "That two languages belong to the same morphological type, or group, does not prove them genetically related in America. A common origin can be asserted only on the basis of lexical correspondence."

— Phonetic constituents of the native languages of California. (Ibid., 1911, X, 1-12.) Dr K. notes the predominance of open vowels and "general reluctance toward lip movements"; rarity of nasal vowels (common in Siouan); frequent association of glottal stops with vowels; stop consonants with moderate stress of articulation; lengthened or doubled stop consonants (in northern Paiute, Miwok, etc.); prevalence of the "intermediateness" sound-type; surds and sonants; sparse representation of

fricatives except of the *s* type; occurrence of *r* in a number of languages.

— The languages of the American Indians. (Pop. Sci. Mo., Lancaster, Pa., 1911, LXXVIII, 500-513, 2 maps.) Treats of the character, distribution, etc., of Indian languages, the Uto-Aztecan and Algonkian stocks in particular (with distribution maps of Uto-Aztecan, Eskimoan, Athapaskan, and Algonkian). The conservation of these languages is pointed out and some popular errors noted (e. g. the idea of the "scanty vocabulary" of Indian tongues. Methods of scientific study of phonetics and of grammatical structure are discussed, also the writing of Indian languages.

— Shellmounds at San Francisco and San Mateo. (Rec. of Past, Wash., 1911, X, 227-228, 1 fg.) Résumés briefly results of Nelson investigations of 1909-1911. Dr K. considers probable the estimate of Mr Nelson that the beginnings of at least some of these deposits are 3,000 years old or more.

Kunike (H.) Beiträge zur Anthropologie der Calchaqui-Täler. (Archiv f. Anthrop., Brunschwg., 1911, N. F. X, 203-225, 3 pls., 14 fgs., map.) Treats with descriptions (pp. 204-217) and details of measurements (pp. 220-225) of 240 crania from various parts of the Calchaqui region of Argentina. The great majority of the skulls are deformed, but only 5 have pathological characters. The male skulls run from about 1,400 to 1,500 ccm. in cranial capacity, the female from 1,200 to 1,300 ccm., the total range being from 1,010 to 1,710 ccm. The index-types are 4,—normal brachycephalic, *ca.* 90, deformed *ca.* 100; normal dolichocephalic *ca.* 80, deformed *ca.* 75. The preponderatingly brachycephalic element may have come from the north, while the less numerous dolichocephalic element may represent the indigenous population.

Leden (C.) Musik und Tänze der grönländischen Eskimos und die Verwandtschaft der Musik der Polareskimos mit der der Indianer. (Z. f. Ethnol., Berlin, 1911, XLIII, 261-270, 5 fgs.) Treats of Eskimo music and dances (the author was in Greenland, west and north in 1909, east in 1910).

The old drum-dance and duel-song exist still on the east coast and among the Polar Eskimo,—relics also at Umanatsiak, on the west coast. The Polar Eskimo songs are of individual composition, and their melodies have often no texts, unlike those of the east and west coast in general (here occur comic and satirical songs, love-songs, animal-pantomimes). Specimens of songs (melody and text) are given from Eskimo of Umanatsiak (west), North Star Bay (Polar), Cape Dan (east), with American Indian songs (Thompson R., Hopi) for comparison. According to L., the music of the Polar Eskimo is very closely related to that of the Indians; not so that of those of the east and west coasts.

Lehmann (W.) Ergebnisse einer Forschungsreise in Mittelamerika und México 1907-1909. (Ibid., 1910, XLII, 687-749, 12 fgs., map.) This valuable monograph gives the results of Dr L.'s archeological and linguistic investigations in Central America and part of Mexico during the years 1907-1909. The farthest extension of prehistoric Mayan culture is on the islands of Fonseca Bay; the proto-Mexican culture extended beyond long. 85°, lat. 10°; the northern intrusion of South American stocks is traceable into Guatemala. According to Dr L., the Sumo languages are closely related to the Mosquito, and with them belong also the Matagalpa-Cacaopera (see pp. 714-723) and, remotely the Paya, Jicaque, Lenca and Xinca (a comparative vocabulary is given on pp. 724-727). The Pipil (pp. 728-734) is closely related to ancient Nahuatl. The archeological problems in Salvador are numerous,—here we have to deal with tribes related to the "Mayoide Zwischen-völker" of Mexico (Totonacs, Olmecs, Xicalanca), i. e., peoples, whose culture suggests the Mayas, without their language belonging to that stock. The archeological types include simple stone-yokes (the eastern limit of these is in Salvador); certain flat conventionalized stone sculptures of human heads; three-cornered stone sculptures of the Palma-type; great stone sculptures of the Chac-Mol type; alabaster vessels; clay vessels with metallic

luster; figure-vessels suggesting the Zapotec funeral urns of Oaxaca, etc. The Coribici, Caribici, or Curubici Indians represent a stock, formerly more widely diffused, of which the Guatusos (or "wild Ramas") and the Ramas are remnants. The ruins of Copan indicate the former high culture of the Mayan Chorti, whose influence in eastern Salvador and Honduras is pre-Pipil. The language-distribution map lists 15 stocks: Mixe-Zoque; Mixteco-Zapotec; Huave; Aztecan; Mayan; Subtiaba; Xinca-Lenca-Jicaque-Paya; Matagalpa-Cacaopera-Sumo-Ulua-Mosquito; Rama-Guatuso; Voto-Guëtare-Talamanca-Terraba-Bonica (Chibchan); Guaymi-Dorasque; Cuna-Choco; Cu-eva (Coiba); Cariban (Karif, Island Carib). But some of these identifications and applications are still doubtful.

Lehmann-Nitsche (R.) Vocabulario Chorote ó Solote, Chaco occidentale. (Rev. d. Museo de La Plata, 1910-1911, xvii, 111-130.) Gives (pp. 115-128) classified vocabulary (following model of the *Tabelle zur Aufnahme südamerikanischer Sprachen* issued by the Berlin Ethnological Museum), containing words obtained from Chorotes of S. Pedro de Jujuy by the author in 1906 (besides others obtained in 1909 at Ledesma, Jujuy, in 1909 by S. Debenedetti; also Mataco words obtained by the author and Sr Debenedetti in 1906 and 1909), together with corresponding Mataco words from Pelleschi and Remedi, Nocten words from Massei, Vejoz words from d'Orbigny, etc. On pages 128-130 is a bit of Chorote phrases. The first scientific monograph on the Chorotes is that of von Rosen in 1904. The name is pronounced variously as *Chorote*, *Choroti*, *Soloti*, *Solote*,—and in 1733 Father Lozano wrote it *Xolota*.

Lenz (R.) See Tournier (L.).

Levi (E.) Sopra alcuni casi di Albismo parziale eredo-famigliare in Negri della Lusiana. (Arch. p. l'Antrop., Firenze, 1910, XI, 454-456.) Treats of the investigation by Prof. F. Frassetto in *Att. d. Soc. Rom. di Antrop.* (1910) of one member of the family, of which three had been previously studied by L. Ac-

- cording to L., in cases of partial albinism, we have not *dermatosis* but *dischromia*.
- Lowie (R. H.)** The Crow Indians of Montana. (Amer. Mus. J., N. Y., 1911, XI, 179-181, 2 fgs.) Notes on the tobacco-dance ("a cycle of beautiful and impressive performances beginning in the early spring when the seeds of the tobacco are sown and terminating with the gathering in of the crop"), the *buptsake* or boys' military organization (imitative of adults), the "mother-in-law taboo," etc. The Crows show intelligence and capacity for progress—"one of my Crow friends subscribes for the *Literary Digest*."
- Lumholtz (C.)** Indiens Papagos. (J. Soc. d. Amér. de Paris, 1910 [1911], N. S., VII, 331-332.) Reproduces letter on Papagos and their country, from *La Géographie*, XXII, 56.
- MacCurdy (G. G.)** A study of Chiriquian Antiquities. (Mem. Conn. Acad. Arts & Sci., New Haven, 1911, III, XX + 249, 49 pls., 384 fgs.) Chiefly the result of "a careful study of the unparalleled collection of Chiriquian antiquities belonging to Yale University." Stone (arrow- and spear-points, celts, polishing stones, metates, rubbing or hand stones, stools, images, ornaments, petroglyphs), pottery (unpainted, painted; stools, spindle-whorls and stamps, needle-cases, figurines, musical instruments, rattles, drums, wind instruments), metal (alloys of gold and copper, casting, articles of use, ornaments, figurines of animals, human figurines, figurines with mixed attributes, masks, plaques), etc. This monograph has a historical introduction, bibliography, and a good index. Dr McC. calls attention to "the general phylogenetic trend in the development of Chiriquian art as a whole." Except as regards architecture, "the stone art of Chiriqui compares favorably with that of Mexico or Peru." The great bulk of Chiriquian antiquities consists of fictile products. Classification is according to animal motives. Notable is the *armadillo* (Holmes' *terra cotta* or *biscuit*); others are *serpent*, *fish*, etc. For a small group, with distinctly Costa Rican affinities, the author proposes the name *chocolate incised*. The plastic origin of the *armadillo* motives asserts itself even when transferred from unpainted to painted ware. *Alligator* motives are in color not relief. Three distinct systems of painting are noted. The great majority of the metal pieces were cast, wholly or in part; the majority of the motives are composite in character. Among deities recognized are the alligator-god, parrot-god, jaguar-god, crab-god, etc. The boundaries of Chiriquian culture exceeded those of the modern province of that name, particularly in the direction of Costa Rica. Evidences of contact with and influence by S. America are not wanting.
- An Aztec "calendar stone" in Yale University Museum. (Amer. Anthropol., Lancaster, Pa., 1910, N. S., XII, 481-496, 10 pls., 3 fgs.)
- Seventeenth International Congress of Americanists. Second Session—City of Mexico. (Ibid., 600-605.)
- Macías (C.) y Rodríguez Gil (A.)** Los actuales indios tuxpaneca del Estado de Jalisco. (An. Mus. Nac. de Arqueol., México, 1910-1911, II, 195-220, 5 pls.) Treats of the modern Tuxpanecas of the State of Jalisco: Physical characteristics (measurements of men and 1 woman are given, pp. 200-206; male stature averages 1,670 mm.), clothing and ornament (men's dress has lost all its primitive character, that of the women preserves some), food, dwellings, agriculture (maize, beans, etc.), domestic animals, industries, trade, festivals and amusements (translation of images in the feast of St. Fabian and St. Sebastian), religion (Catholicism with admixtures of heathenism), superstitions (belief in witchcraft, etc.), family and society (monogamic solely; wedding ceremonies). These Indians are moral and docile.
- Manquilef (M.)** Comentaríos del Pueblo Araucano. La Faz social. (Rev. de Folk-lore Chileno, Santiago, 1911, II, 1-60, 4 fgs.) Gives on pages 19-59 descriptions, in native text with translations, of Araucanian life, activities, etc.: festal dress and ornaments, house-building (bachelor's song, p. 39), branding and marking of animals, making the corral, the

- traveler's return (brief songs, p. 51), the making of *mudai* or wheat-beer (song, p. 56), the making of cider. Free renderings of all texts are also given, and at pages 59-60 a list of Chilianisms occurring in the texts.
- Mead (C. W.)** A gift from Ecuador. (Amer. Mus. J., N. Y., 1911, XI, 83, 1 fg.) Note on a stone seat from Manabi,—the Museum possesses two such, belonging to the Stapleton collection.
- Melton (A.)** The legend of Black Snake. (Carlisle Arrow, Carlisle, Pa., 1911, VIII, No. 10, 1.) Story of a Cherokee religious innovator who was killed by the inferior tribes.
- Michelson (T.)** Menominee tales. (Amer. Anthropol., Lancaster, Pa., 1911, N. S., XIII, 68-88.)
- On the future of the independent mode in Fox. (Ibid., 171-172.)
- Note on the gentes of the Ottawa. (Ibid., 338.)
- On the etymology of the Natick word kompan, 'he stands erect.' (Ibid., 339.)
- Piegan tales. (J. Amer. Folk-Lore, N. Y., 1911, XXIV, 238-248.)
- Ojibwa Tales. (Ibid., 249-250.)
- Michigan the storm-center of American archeology.** (Amer. Antiq., Benton Harbor, Mich., 1911, XXXIII, 12-24.) Discusses the alleged discoveries of prehistoric copper, stone, and clay relics, tablets, etc., relating the fall of man, the deluge, the creation, etc. See Kelsey (F. W.).
- Millward (R. H.)** Cuernavaca, the sun-child of the Sierras. (Nat. Geogr. Mag., Wash., 1911, XXII, 291-301, 9 fgs.) Treats of Mexican town, 75 miles from City of Mexico. Contains notes on diminutive dolls made by Indian maiden (pp. 297-299), Indian pottery, evidences of ancient civilization, etc.
- Mt Pleasant (E.)** Tuscarora and Mohawk contest. (Red Man, Carlisle, Pa., 1911, III, 341-342.) Account of lacrosse game in which the Tuscaroras defeated the Mohawks, in spite of the fact that the latter hired Seneca medicine-men to help them out.
- Mumblehead (J.)** A legend of the Cherokee rose. (Ibid., 1911, IV, 28.) Brief story of Cherokee maiden who carried the wild rose from her own country to that of her Seminole lover.
- Museum (The) of Anthropology of the University of California.** (Science, Lancaster, Pa., 1911, XXXI, 794.) Note on Hearst collection in archeology and ethnology, opened for public exhibition on Oct. 4, 1911.
- Neandros (S.)** The work on the ceremonial canoe. A modified method of making plaster-casts from life. (Amer. Mus. J., N. Y., 1910, X, 238-243, 9 fgs.) Treats of the paraffin-coating method of taking plaster-casts, resulting in greater accuracy of form, less disagreeable process for the model, more perfect life casts, etc. This method is used to produce the ceremonial canoe scene of the Chilkat Indians for the Museum. Other new devices are also indicated.
- Nordenskiöld (E.)** Archäologische Forschungen im bolivianischen Flachland. (Z. f. Ethnol., Berlin, 1910, XLII, 806-822, 13 fgs., map.) Gives results of Hernmarck expedition to Bolivia in 1908-1909 concerning the archeology of the eastern lowlands, where a "semi-culture" existed which appears to have been completely independent of the culture of the mountain-region,—the Inca-culture never reached the plains and primeval forest here, while the rivers favored distribution from Brazil. In the Moxos country are mounds (partly dwelling-sites, partly graves,—also used for manioc-culture in swampy-lands). The burial-urns (on three supports) and certain other ceramic remains point not to Peru but to northern S. America,—indeed, the more recent pottery from the mounds belongs probably to the ancestors of the Arawakan peoples now inhabiting the Moxos region. N. is of opinion that by intermediary of the Arawaks culture-influences from northern S. America and Central America have been transmitted to eastern Bolivia and elsewhere in the heart of the continent. The early Jesuit missionaries came across remains of this semi-culture.
- Oliver (M. L.)** The snake dance. (Nat. Geogr. Mag., Wash., 1911, XXII, 107-137, 31 fgs.) Well-illustrated account of the snake-dance as performed under the auspices of the Antelope and Snake priests of the Hopi (Moquis), "at the hostile vil-

- lage, 'Ho-Ta-Vila,' seven miles beyond Oraibi," a very conservative community where "missionaries are not welcome, schools do not exist, clothes are not necessary, and the old faith of the Hopi is guarded and taught with care."
- Olsson-Seffer** (H.) *The Isthmus of Tehuantepec.* (Ibid., 1910, XXI, 991-1002, 7 fgs.) Contains notes on the Indian tribes of the region, dress and ornament, handicraft, "royal purple," marks of an older civilization, etc. The illustrations represent dug-outs, native laborers, dances, etc.
- (P.) *Agricultural possibilities in tropical Mexico.* (Ibid., 1021-1040, 19 fgs.) Contains some notes on native habits, activities, etc., which some of the pictures illustrate.
- Outes** (F. F.) *Los tiempos prehistóricos y protohistóricos en la Provincia de Córdoba.* (Rev. Mus. de La Plata, Buenos Aires, 1911, XVII, 261-374, 134 fgs.) Treats of the prehistoric and protohistoric period in the Argentine province of Córdoba,—paleolithic and neolithic remains, etc., as represented in the collections of the La Plata Museum: Flint and stone implements, instruments, weapons, ornaments, etc.; implements, ornaments, etc., of bone and shell; metal objects, pottery, anthropomorphic figures, etc. At pages 312-317 are described and figured rock-pictures and petroglyphs from the cerro Casa del Sol, cerro Colorado, the arroyo Luampampa, etc. Of interest are the inscribed axes from Lago San Roque and the anthropomorphic figures (sex indicated by secondary characters only) from the same locality and elsewhere. A mortar found at Dalmacio Vélez is figured on p. 374. The neolithic peoples of the region, the Sanavirones, Comechingones, etc., are considered at pp. 292-307. Of the alleged evidences of pleistocene man, Dr O. considers the finds at Malagueño very doubtful, and those near the National Observatory among the least doubtful.
- Paine** (C. S.) *Ethnology at the annual meeting of the Nebraska Historical Society.* (Amer. Anthropol., Lancaster, Pa., 1910, XII, 728-729.)
- Parker** (A. C.) *The origin of Iroquois silversmithing.* (Ibid., 349-357, 4 fgs.)
- *Fate of the New York State collections in archeology and ethnology in the Capitol fire.* (Ibid., 1911, N. S., XIII, 169-171.)
- *Additional notes on Iroquois silversmithing.* (Ibid., 283-293, 5 fgs.)
- Patterson** (S.) *Legend of the bear star.* (Red Man, Carlisle, Pa., 1911, IV, 24.) Brief Seneca legend of Indians captured by a bear and taken up into the sky.
- Peabody** (C.) *The exploration of mounds in North Carolina.* (Amer. Anthropol., Lancaster, Pa., 1910, N. S., XII, 425-433, 4 fgs.)
- Peccorini** (A.) *Dialecte Chilanga.* (J. Soc. d. Amér. de Paris, 1910 [1911], N. S., VII, 122-130.) Gives (translated from the Spanish of the author by le Comte Maurice de Périgny) vocabulary, 2 volumes to the page (pp. 121-126), the conjugations of the verbs "to do," "to hold," "to love," "to be," "to press," "to eat," "to drink," "to set out," "to call," etc., in the language of the village of Chilanga, north of San Francisco, capital of the Department of Morazan, Republic of Salvador.
- Perkins** (G. H.) *Aboriginal remains in the Champlain Valley. Second Paper.* (Amer. Anthropol., Lancaster, Pa., 1911, N. S., XIII, 239-249, 6 pls.)
- Petitot** (E.) *Dates importantes pour l'histoire de la découverte géographique de la Puissance du Canada.* (Bull. Soc. Neuchât. de Géogr., Neuchâtel, 1911, XX, 442-452.) Useful list of the principal dates relating to geographical discovery in Canada 1496-1907.
- Porter** (C. E.) *Les études anthropologiques au Chili.* (J. Soc. des Amér. de Paris, 1910 [1911], N. S., VII, 202-219.) Consists of a "Bibliographie Américaniste Chilienne" (pp. 209-219) of some 205 titles, preceded by notes on the chief contributions in anthropogeography (by Vergara Flores, Solís-Varela, Guevara, Latcham, etc.), ethnography (Medina, Guevara, Reiche, Philippi, etc.), linguistics (Lenz, Barros Arana, Cañas-Pinochet, Guevara, Schuller, San Roman, Echeverría y Reyes), archeology and prehistory (Barros Grez,

Cañas-Pinochet, Medina, Guevara, Vergara Flores, Latham, etc.), the anthropological and ethnological collections in Chili, etc. The bibliography of Chilian Americana is part of the author's proposed *Ensayo de una Bibliografía chilena de Historia natural*. He had previously published an article on the *Literatura antropológica y etnológica de Chile* in the *Revista Chilena de historia natural*, 1906, x, 101-127. Easter Island is included in the Chilian bibliography. Prof. Porter's *Bibliografía chilena de antropología y etnología* has appeared in the *Anales del Mus. Nac. de Buenos-Aires*, 1910, S. III, 147-188.

Preuss (K. T.) Naturbeobachtungen in den Religionen des mexikanischen Kulturkreises. (Z. f. Ethnol., Berlin, 1910, XLII, 793-804.) Treats of natural phenomena in the religions of Mexican Indians, particularly the Cora, Huichol, Mexicano, etc.: Distinction of sun and sky; identification of underworld and night-sky and the development of the latter into a lunar deity (also ancient Aztecs); earth and lunar deities as deities of fire; night and water; close connection of water with fire; conflict between moon and stars and between stars and stars; water of night; myth of creation of man.

— Die Opferblutschale der alten Mexikaner erläutert nach den Angaben der Cora-Indianer. (Z. f. Ethnol., Berlin, XLIII, 293-306, 6 fgs.) Compares the *quauhxicalli*, or sacrificial blood-vessel of the ancient Mexicans (made of polished stone) with the *treša* or gourd-vessel on the altars of the modern Cora Indians,—the interpretations by the natives of the vessel as "the world" are given. The divisions of the world are primary, the attributes assigned to the gods secondary. The symbolism of the Cora and the old Mexican vessels are strikingly similar (the *olin* is considered at some length). This example shows, according to the details given by Dr P., how the data obtainable from modern Indian tribes serves to explain and interpret the ideas and symbols of the ancient Mexicans, etc.

— Religionen der Naturvölker

Amerikas 1906-1909. (Arch. f. Religsw., Lpzg., 1911, XIV, 212-301.) Reviews, résumés, and critiques of recent works of Hodge (*Handbook of Amer. Inds.*, Pt I), Culin (games of N. A. Inds.); Boas and Rasmussen (Eskimo); Swanton (Tlingit and Haida); Teit and Hill-Tout (Salishan tribes); Sapir (Takelma); Dixon, Dubois, Kroeber, Sparkman, C. Hart Merriam (Californian stocks and peoples); Lowie (northern Shoshoni); Dorsey, Kroeber (Prairie Algonkian tribes); Dorsey, Pepper and Wilson, Wissler (Siouan tribes); Jones (Central Algonkian peoples); Parker (Iroquois); Speck (Muskogean tribes); Stevenson (Zuñi); Russell, Brown (Pima); Seler, León, Breton, Bauer (Mexican); Stempel, Tozzer (Mayas); Fewkes (Porto Rico); Koch (tribes of N. W. Brazil); Rivet (Jivaro); Nordenskiöld (Peru and Bolivia); De Goeje (tribes of Surinam); Boman (Andine region of Argentina); Latham (Araucanians); Ignace (Negroes of Brazil), etc.

Radin (P.) The ritual significance of the Winnebago medicine dance. (J. Amer. Folk-Lore, N. Y., 1911, XXIV, 149-208.)

Rivet (P.) A propos de l'origine du mot "Pérou." (L'Anthropologie, Paris, 1911, XXII, 289-294.) In this brief, well-documented study Dr R. seeks to show that *Peru* (Piru, Biru, Pelu, Beru), is identical with the Barbacoan word *pilu*, "hole filled with water," from *pi*, "water, river." The "river" in question would be the *Iscuando* of the coastal region of southern Colombia. The name *Peru* was known in Panama (where the Spaniards picked it up) long before their arrival there. The language of the Caras of Ecuador, as such names as *Tumbaviro*, *Pimampiro*, etc., suggest, was closely related to the Barbacoan.

— XVII^e Congrès international des Américanistes. (J. Soc. d. Amér. de Paris, 1910 [1911], 328-331.) Gives list of papers read from *Sumários* of Dr Lehmann-Nitsche.

— Les langues Guaranies du haut Amazone. (Ibid., 149-178.) Treats of the Cocama and Omagua languages of the Tupian or Guaranian

stock,—with these two tribes are classed as Guaranian also the Cocamillas of the Huallaga and the Yurimaguas or Zurimaguas. An extensive vocabulary of both Cocama and Omagua is given. Also the text of the *Pater Noster* and the Catechism in Omagua, and some comparative grammatical notes on the two-languages.

— Sur quelques dialects Panos peu connus. (*Ibid.*, 221-242.) Treats (with bibliography and list of tribes) of the Yamiaca, Arazaire, and Pacaguara dialects of the Panoan stock. Vocabularies of each are given together with a few grammatical notes. The Arazaires are the Arasa of Nordenskiöld. Dr P.'s Yamiaca is from von Hassel, the Arazaire from Llosa, and the Pacaguara from Armentia and Heath.

Robelo (C. A.) Origen del Calendario Náhuatl. (*An. Mus. Nac. de Arqueol., México*, 1911, III, 337-350, 4 pls.) Discusses the origin of the ancient Mexican calendar with special reference to the engraved stones of Coatlan, which contain the figures of *Cipactonal* and *Oxomoco* as they are depicted in the Codices. It is to these that the account of Mendieta probably refers. R. thinks the calendar was invented at Coatlan.

Robles Rodríguez (E.) Ñeigurehuen-Baile de Machis. (*Rev. de Folklore Chil., Santiago*, 1911, II, 113-135.) Treats of the dance of the *machis* or "medicine-men" of the Mapuche or Araucanians. Detailed description with native text and translation of song used. Also (pages 114-116) text and translation of Araucanian *piuketun* or oath. The dance described was held at Lincaneu, to the south of Cautin de Temuco.

— Guillatunes. (*Ibid.*, 1911, I, 223-249.) Describes an Araucanian *guillatun*, an ancient ceremonial upon the dream of a cacique to show the gods that the people have not forgotten their religious rites, dances, customs. Prayers and sacrifices formed part of the *guillatun*, faith in which has been lost by many Indians who have adopted the habits of the whites. At pages 245-249 are given native texts and translations of three *nillatun* or prayers used in the *guillatun*.

These ceremonies may be compared with some of those of the Plains Indians of North America.

Roth (W. E.) Some technological notes from the Pomeroun district, British Guiana. Part III. (*J. R. Anthropol. Inst., Lond.*, 1911, XLI, 72-82, 15 pls.) Treats in detail of the manufacture of open-work basketry ("all baskets for permanent use are made by men, and manufactured in different styles according to the pattern of the foundation, *tuinatuku*"), traps (cylinder, spring and cage, landing-net, etc., for fish; bow-and-arrow trap, spring and fall traps, nooses, etc., for animals and birds; rat-trap), fans (Warrau, Carib, and Akkawaio) among the Arawaks and Warraus of the Pomeroun. Temporary baskets of leaves of the *ite* and the *manicole* palms are made by the Warrau women and Arawak men.

Runnels (L.) The struggle against darkness. (Red Man, Carlisle, Pa., 1911, IV, 27.) Brief San Poil legend of the obtaining of fire after dampness and vapors had extinguished the first camp-fires.

Russell (J. A.) Notes on prehistoric discoveries in Wayne County, Michigan. (*Amer. Antiq., Benton Harbor, Mich.*, 1911, XXXIII, 135-143.) Treats of Savage-Soper-Scotford discoveries. See Starr (F.) and Kelsey (F. W.).

Sapir (E.) Some aspects of Nootka language and culture. (*Amer. Anthropol., Lancaster, Pa.*, 1911, N. S., XIII, 15-28.)

— The problem of noun incorporation in American languages. (*Ibid.*, 250-282.)

— Anthropological division. Report. (Summary Rep. Geol. Surv. Br. Dept. of Mines, 1910, Ottawa, 1911, 284-285.) Brief account of field-work among the Nootka in Sept.-Dec., 1910 (collection of mythological and ethnological texts, museum specimens; 67 songs recorded on phonograph; observation of potlaches, doctoring ritual, puberty ceremonies, etc.), with note on work among Arctic Eskimo (Stefansson).

— An anthropological survey of Canada. (*Science, Lancaster, Pa.*, 1911, N. S., XXXIV, 789-793.) Notes establishment on Sept. 1, 1910, of a division of Anthropology under the

- Geological Survey of Canada (with Dr Saporin in charge, Mr C. M. Barbeau as assistant in Anthropology, and Prof. H. I. Smith, as archeologist). Outlines problems and lines of work suggested. Dr S. rightly emphasizes the importance of a knowledge of the language of the natives concerned.
- Saunooke** (N.) Why the turkey is bald. (Red Man, Carlisle, Pa., 1911, III, 255-256.) Cherokee legend how turkey was singed in attempt to keep spark of fire alive. Told to account for using turkey-wing for fire-fan.
- Scanland** (J. M.) In the land of Evangeline. (So. Wkmn., Hampton, Va., 1911, XL, 231-237.) Treats of the Acadians of the Bayou Teche, La. Houses and activities, food, hunting, alligator-killing (pp. 234-336), bear-trapping, "pirates' buried gold."
- Schenk** (A.) Note sur un crâne otomi. (Bull. Soc. Neuchât. de Géogr., Neuchâtel, 1910, XX, 457-464, 1 pl.) Describes, with measurements (cran. cap. 1,248 ccm.; ceph. ind. 83.23), a young male Otomi skull in the Ethnographic Museum of Neuchâtel, compared with Otomi skulls studied by Méréjkowski, de Quatrefages, and Hamy (6 in all besides the one here recorded).
- Schmidt** (M.) Brief vom oberen Paraguay. (Z. f. Ethnol., Berlin, 1910, XLII, 953-954.) Under date of June 1910, reports visit to Guató of Caracara. From old burial-places human bones, fragments of pottery, etc., were obtained. Two *atterados* were examined. Six different localities for picture-rocks were noted.
- Seler** (E.) Brief aus Mexico. (Ibid., 1911, XLIII, 310-315, 3 figs.) Gives account of three weeks' visit to the ruins of Palenque with notice of old Totonac capital of Cempoallan and the ruins of an old town in the forest near Frontera. The ruins were carefully studied and drawings, rubbings, casts, etc., taken of certain parts, some hitherto not reproduced.
- Über den Internationalen Amerikanisten-Kongress in Buenos Aires und Mexico. (Ibid., 117-128.) Account of meeting with brief notes on more important papers and their authors, particularly those from Argentina, etc.
- Senet** (R.) Las conclusiones antropológicas de Ameghino y las ciencias afines. (Arch. de Pedag., La Plata, 1911, IX, 193-202.) Discusses the anthropogenetic theories and ideas of F. Ameghino,—the *Tetraprothomo argentinus*, *Triprothomo*, *Diprothomo platensis*, *Prothomo*, etc. S. concludes that A.'s conclusions are in accordance with ontogeny and phylogeny.
- Sergi** (S.) I rilievi cerebrali delle fosse temporali nei crani deformati del Perú. (Atti d. Soc. Rom. di Antrop., Roma, 1910, xv, 271-284, 4 figs.) Treats of the "cerebral reliefs of the temporal fossae in deformed Peruvian skulls (4 types of deformation are distinguished). According to Dr S., "to determinate conditions of artificial deformations of the skull always correspond determinate aspects of the cerebral reliefs of the temporal fossae.
- Sul *Diprothomo Platensis*, Ameghino. (Ibid., 1911, xvi, 113-122, 4 figs.) Gives results of investigation of the fragment of a skull, considered by Ameghino to belong to a precursor of man in America. According to S., the *Diprothomo* may belong to the *Hominidae*, but differs altogether in many characters from the living type. The antiquity of the fragment is beyond doubt.
- Skinner** (A. B.) The Menomini Indians. (So. Wkmn., Hampton, Va., 1911, XL, 572-579, 6 figs.) Notes on history (always friends of whites), population ca. 1500), religion (Christians; pagans) and mythology (good and evil powers; thunder-birds), "medicine," puberty-fasts and dreams to obtain power, lacrosse, morality (good). Among the pagans the two religious organizations, the "Medicine Lodge Society," and "The Dreamers," are still "very much alive." The old-time costumes are worn only at ceremonies.
- The Florida Seminoles. (Ibid., 154-163, 6 figs.) Account of visit in 1910 to Seminole camps,—houses, dress and ornament, language (differences between dialects of Big Cypress and Everglades, 4 words given, p. 161), etc. The three divisions, Big Cypress, Everglades and Crow

Creek, of Florida Seminoles number about 325, and they are about holding their own. There is "a peculiar 'pigeon English'" spoken by the Indians when dealing with whites. There is said to be no admixture of negro blood.

— War customs of the Menomini Indians. (Amer. Anthropol., Lancaster, Pa., 1911, N. S., XIII, 299-312, 2 fgs.)

— The Menomini game of lacrosse. (Amer. Mus. J., N. Y., 1911, XI, 139-141, 6 fgs.) Describes "a ceremonial game of lacrosse [witnessed in the summer of 1910], which is interwoven with the legend of the Thunderers and revolves about the idea of the birth and death of these spirits in man." The Thunderer-legend connected with lacrosse is given (p. 140) as "gained through the interpreter from one of the oldest Indians of the tribe."

Skyye (M. L.) The Seneca legend of the seven stars. (Red Man, Carlisle, Pa., 1911, III, 235.) The seven stars were seven sisters who disobeyed a prohibition to approach a magic fountain and were seized by the monster guardian who placed them in the sky.

— Origin of the green corn. (Ibid., 1911, IV, 28-29.) Iroquois legend of origin of maize from woman who sacrificed herself to save her people from starvation. See also 343-344.

Smith (H. I.) The prehistoric ethnology of a Kentucky site. (Anthr. Pap. Amer. Mus. Nat. Hist., N. Y., 1910, VI, 173-241, 48 pls., 1 fg.) Detailed investigation of village-site (no evidences of white contact) on the Fox farm, in Mason Co., Kentucky, about 14 miles south southwest from Maysville,—the site, while prehistoric, is of no great antiquity, judging by positive evidence. The topics treated are: Resources in animal and plant materials, securing and preparation of food, habitations, tools used by men and tools used by women, processes of manufacture, games, religious objects, pipes, and amusements, warfare, dress and ornament, art, injuries and diseases, method of burial, etc. The inhabitants of the village-site built the mounds on the farm, as indicated by similarity in the artifacts found. Altogether, "the material

culture of this site in Kentucky resembles that of the Adena Mound, Baum and Gartner sites, the main or early part of the Robert Harness Mound, and the Oregonia, Fort Ancient and Madisonville sites of Ohio," and "it belongs to what Mills has termed the 'Fort Ancient culture.'" The pottery is of the poor type (Holmes' "archaic northern").

— Primitive work in metal. (So. Wkman., Hampton, Va., 1911, XL, 209-218, 6 fgs.) Treats of use of iron by African negroes, copper by American Indians, etc. (also other metals in Mexico, C. and S. America). The silversmith work of the Haidas (p. 215), the Navahos, Zuñi, Iroquois is also considered.

— Minnehaha's people. (Ibid., 336-344, 6 fgs.) Notes on the Siouan Indians of the Plains. Buffalo-hunting, burden-bearing, *travois*, tepee and decorations, food, fishing, fire-making, cooking uses of bone, skin, etc., pictography on skins, dances, social arrangements.

— Harvesting wild-rice in Canada and Minnesota. (Ibid., 615-617, 1 fg.) Brief account of gathering, drying rice, its uses, etc.

— The Thompson Indians. (Ibid., 23-36, 11 fgs.) Treats of habitat (southern interior of British Columbia), physical type, use of Chinook Jargon, effect of white contact, activities, burial, songs, summer lodge and winter house, clothings, affection for children, basketry, etc. (pottery unknown), food, salmon-catching, drying fish, berry gathering and drying, root-drying, smoking, travel and transportation, gambling, rock-paintings (made by girls during initiation), sweat-house, social system, marriage, shamans, religion and mythology (coyote as transformer and world-shaper), art, etc. Evidences of influence of Plains tribes, Coast tribes, etc.

— Primitive ways of working stone. (Ibid., 88-93, 8 fgs.) Treats of chipping and flaking, battering and pecking, grinding, incising, picking, drilling, etc., among American Indians.

— Primitive work in clay. (Ibid., 143-154, 7 fgs.) Discusses origin, material, form, etc., of pottery, methods of making, decoration, etc., illus-

- trations from Mexicans, mound-builders, Pueblo Indians.
- Primitive work in skin. (Ibid., 515-520, 5 fgs.) Treats of tanning and uses of skin among Eskimo, Plains Indians, Modocs, tribes of British Columbia (dress, tipis, skin-boats, *parfleche*, boxes, pouches, drums, harness, armor, etc.).
- Hiawatha's people. (Ibid., 472-479, 4 fgs.) Besides notes on the Iroquoian Hiawatha (pp. 472-474), treats of the Ojibwa Indians of the Great Lakes (environment, language, clothing, ornament, houses, travel and transportation, canoes, food, maple-sugar, agriculture, fire-making, wild-rice, bow and arrow, etc.). It is hardly correct to state (p. 475) that Dakota "differs from the Ojibwa as Spanish does from Russian."
- Canoes of the North Pacific Coast Indians. (Amer. Mus. J., N. Y., 1910, x, 243-245, 3 fgs.) Notes on Haida sea-going canoes, Chinook, Kwakiutl, Bella Coola and other types, decoration, use, etc. Canoes are valuable property. It is very doubtful if sails were used before the advent of the whites, but strips of cedar-bark woven together preceded canvas.
- Totem poles of the North Pacific coast. (Ibid., 1911, xi, 77-82, 10 fgs.) Figures totem-poles from Haida, Tlingit, Comox, Bella Coola, etc. The art of the average totem pole "is on the whole symbolic though rather realistic in appearance." Carved house and grave posts are akin to totem poles. A crude *tamanawas* board from Bay Center (Wash.) "shows totem-pole influence south of the North Pacific culture area."
- (J. B.) Some early beliefs of Indians. (Red Man, Carlisle, Pa., 1911, iii, 453-454.) General items concerning medicine men, thunder, amulets, fasting, etc. See also *Carlisle Arrow*, 1911, vii, No. 35, 1.
- Sniffen** (M. K.) Canada and her Indians. (So. Wkmn., Hampton, Va., 1911, xl, 165-168.) Gives impressions gained from recent study of the Indian situation. S. thinks the U. S. might learn from Canada something in the avoidance of fraud and chicanery, and Canada learn something from the U. S., in the way of making Indians into citizens.
- Speck** (F. G.) Missions in the Creek Nation. (Ibid., 206-208.) Brief account of present condition of Indians and negroes in the northwestern part of the Creek Nation, Oklahoma, effects of white contact, etc. Although fifty years ago the Creeks were largely Christianized, the percentage of Christians among them seems now to be small. Many are Christian in their ethics, but pagan in all else. Many are neither pagan nor Christian. A few of the old congregations, Baptist and Methodist chiefly, are still left. To-day there are "thousands of mixed-blood negroes and Creeks, who pass either as the one or the other." In one little church, the members include negroes, Yuchi Indians, half blood Creeks, etc.
- The Jackson-Whites. (Ibid., 104-107.) Notes on the community known as "Jackson-Whites," in the Ramapo valley from Suffern, N. Y., to Goshen,—character, house, manufactures (basketry, eel-pots, wooden ware),—a collection is now in American Museum of Natural History (N. Y.). They seem to be the result of triple race-mixture, Indian-white-negro. They number some 1,500.
- A visit to the Penobscot Indians. (U. of Penn. Mus. J., Phila., 1911, ii, 21-26, 5 fgs.) Notes on visit in January, 1911,—inauguration of Indian officials (speeches were made in Penobscot), dances (round; snake or winding dance; Micmac dance by men only), wampum necklace and cradle-board now in Heye collection.
- Some Huron treaty-belts. (Ibid., 26-27, 1 fg.) Treats briefly of a wampum belt obtained from the wife of a Wyandot chief in Oklahoma, and another (obtained in 1903 from Atowa Tohonadiheta, a Canadian Iroquois), said to have been used at a treaty in 1612.
- MacHenry, the Bad-Men; a Creek Indian's story. (Red Man, Carlisle, Pa., 1911, iv, 9-11.) Tale of a French Creole and his pretended knowledge of the Indian language.
- Ceremonial songs of the Creek and Yuchi Indians. (Univ. of Pa. Mus. Anthropol. Publ., 1911, i, 155-245, 1 pl.) Gives texts and melodies,

with brief descriptions, translations, etc., of 22 Creek, and 7 Yuchi dance-songs; also 20 Creek medicine songs and formulas. At pp. 237-240 is given the Yuchi text, with English interlinear and free translations, of the legend of the origin of diseases and medicines; and at pp. 241-245 the music of two Shawnee love songs. The greater part of the material was obtained from the Creeks of Taskigi town,—the music was transcribed by Dr J. D. Sapir, who "feels that the Creek songs possess a strength and energy that is lacking in the Yuchi songs, while the latter are more harmonious to the European ear." The medicine songs and formulas "are secret individual property."

— Huron moose hair embroidery. (Amer. Anthropol., Lancaster, Pa., 1911, N. S., XIII, 1-14, 3 pls., 8 fgs.)

— Notes on the material culture of the Huron. (Ibid., 208-228, 4 pls., 19 fgs.)

Spinden (H. J.) An ancient sepulcher at Placeres del Oro, State of Guerrero, Mexico. (Ibid., 29-55, 3 pls., 18 fgs.)

— The making of pottery at San Ildefonso. (Amer. Museum J., N. Y., 1911, XI, 192-196, 10 fgs.) Brief account of pottery-making as now practiced at the Pueblo of San Ildefonso on the Rio Grande about 20 miles N. W. of Santa Fe. The finest pottery has black designs on a whitish ground. The decorative art shows a keen appreciation of nature.

Starr (F.), Kinnaman (J. O.) and Talmage (J. E.) The Michigan archeological question settled. (Amer. Antiq., Benton Harbor, Mich., 1911, XXXII, 160-164.) Reports on "the famous Michigan 'relics' of a prehistoric Caucasian race." The tablets and other objects of clay, slate, and copper "are plainly recent objects, manufactured to deceive." Father Savage, Mr Soper, and Mr Russell have been deceived but were not parties to any deception. See Kelsey (F. W.).

Tahamont (R.) The story of the magic arrow. (Carlisle Arrow, Carlisle, Pa., 1911, VIII, No. 2, p. 4.) Abnaki story of beautiful maiden, foster grandmother (wicked magician) and hunter with magic arrow,

who rescues her,—the old woman, who has turned into a bear, is killed by a chip from the flint of an arrow-maker at his work.

— The grasshopper war. (Ibid., 1911, IV, 29.) Brief legend of origin of a war between tribes of Susquehannock Indians due to quarrel of two boys over the possession of a grasshopper.

Tournier (L.) Las drogas antiguas en la medicina popular de Chile. (Rev. de la Soc. de Folkl. Chil., Santiago, 1911, I, 253-298.) Notes on the old drugs used in Chilean folk-medicine—mercurial compounds much used, remedies for indigestion, the "evil eye" and eye-troubles, powders, tinctures, etc., balsams, fumigation for rheumatism, etc., love-powders. Pages 277-298 are a reprint of a drug-list published at Santiago in 1813. To this *Tarifa* Dr R. Lenz furnishes an introduction (pages 273-275).

Tozzer (A. M.) The value of ancient Mexican manuscripts in the study of the general development of writing. (Proc. Amer. Antiq. Soc., Worcester, 1911, N. S., XXI, 80-101, 7 pls., 16 fgs.) Discusses stages of "reminders," pure picture-writing (symbolism, conventionalizing, etc.), "ideographs" (suggestions take the place of representations), ikonomatic writing or phonetic-picture-writing (numerous illustrations), true phonetic writing,—the Nahuas just stopped short of this last stage; the development further was the work of the Spaniards in their endeavor to teach the natives the creed of the church. According to Dr T. "there is found in Mexico, perhaps to a greater degree than in any other one place in the world, examples of all the different kinds of writing,"—i. e. up to the beginnings of a syllabary. Concerning the Maya writing the author thinks that the true line of research will lie in the direction of "rebus-forms"; also that, as Bowditch holds, "the consonantal sound of a syllable was of far greater importance than the vowel sound."

Uhlenbeck (C. C.) Original Blackfoot Texts from the Southern Piegan Blackfoot Reservation, Teton County, Montana. With the help of Joseph Tatsey. (Verh. d. k. Ak. van Wetensch. te Amsterdam, Afd. Letterk., N. R., D.

- XII, No. 1, X, 1-106.) Contains, in parallel columns, Blackfoot texts and English translations of brief legends of origin of 19 clan-names (pp. 1-4); also (pp. 5-66) of 15 legends and myths: The people living in the north, the origin of the buffaloes, the origin of the buffalo-stones, the leader-buffalo, Blue-face, Belly-fat, Clot-of-blood, Scar-face, horses found on an island, the two buffalo-lodges, the wolverine, an old woman left on a campground, a woman sacrificed to a butte, two adventures of the Old Man, Whom-the-buffalo-inquires-after. On pages 66-68 are texts and translations of 15 brief Bear-chief's songs. An Appendix (pp. 69-93) contains information concerning Bear-chief,—genealogical notes, life-story, creation-legend. There is a good index. See also review of this monograph by Dr T. Michelson in *American Anthropologist*, 1911, N. S., XIII, 326-330.
- Geslachts- en Persoons-namens der Peigans. (Versl. en Meded. d. K. Akad. v. Wet., Afd. Ltrk., 4^eR., D. XI, Amsterdam, 1911, repr., pp. 26.) Treats of clan, family, and personal names among the Piegan (Blackfoot) Indians, with accounts of origin, significance, etc. At pages 23-26 are given accounts of the genealogies of Joseph Tatsey, Ninaistaku (Mountain Chief), Ninochkyao (Bear Chief), etc. At pages 5-11 the traditional origin of the various clan-names is given. See review by R. H. Lowie in *American Anthropologist*, 1911, N. S., XIII, 324-326.
- Venne (E.) Facts about the Chippewas. (Carlisle Arrow, Carlisle, Pa., 1911, VIII, No. 10, 1.) Story of punishment of man who deserted one wife for another.
- Vignaud (H.) Les expéditions des Scandinaves en Amérique devant la critique. Un nouveau faux document. (J. Soc. d. Amér. de Paris, 1910 [1911], N. S., VII, 85-116.) Critical discussion of the real and alleged Scandinavian expeditions to America. Treats of the original sources of information, the voyages to Vineland, the historical value of the Sagas, the location of Vineland (not placed in America before the 18th century), the inventors of the idea that Vineland was in America (the originator was Jonsson Arngrim, an Icelandic, in 1609-1610), the arguments for and against the Scandinavian discoveries of America (distances, astronomic position, vine and wild wheat, natives of Vineland, archeological proofs,—Dighton Rock, Fall River skeleton, stone mill at Newport, Monhegan Id. inscription, inscriptions of Yarmouth, Grave Creek tablet, "Syasi-the-blond," the Minnesota "runic stone," etc.). V. rejects the Kensington stone along with other alleged documents of a somewhat similar nature. There is thus no other evidence whatever as to the location of Vineland and its discovery except the mention in the Sagas. V. concludes that the Scandinavians never got as far south as New England,—Vineland was possibly some part of Labrador, if in America at all. No real "discovery" of America valid for the world was ever made by the Scandinavians.
- Wagner (É. R.) La légende du "Cipriu." (J. Soc. d. Amér. de Paris, 1910 [1911], N. S., VII, 145-147.) Tale, from the region of the Rio Salado in the Argentine, of the little bird "Ci-priu" (so termed from its plaintive cry), once a pretty woman, Cyprienne, but changed into a bird, that still laments its former husband.
- (L. D.) Massacre de Jules Crevaux D'après les dires d'un chef Toba. (Ibid., 121-122.) Brief account, obtained by W. in 1886, from a Toba chief of the killing of the French explorer Dr J. Crevaux.
- Waite (A. W.) The legend of the Tacquish. (Carlisle Arrow, Carlisle, Pa., 1911, VIII, No. 9, 8.) Brief Serano legend of the flight at Arrowhead Springs, near San Bernardino, Cal., of Tacquish, an evil spirit in the form of a large ball of fire. Used as a bogey to frighten children.
- Waldmann (S.) Les esquimaux du nord du Labrador. (Bull. Soc. Neuchât., Neuchâtel, 1910, XX, 430-441.) Notes on childhood (child takes name of last dead member of family and child is told about him and his deeds as soon as possible), hunting (seal and sea-lion) and fishing (generally left to women), marriage, physical characters, food, clothing, boats, religion (spirits good or bad; *angakok* and his functions), myth-

- ology and folk-lore (protection of animals; aurora borealis; why the raven is black). The author is a missionary at Killinek, Cape Chidley.
- Ward (R. D.)** A visit to the Brazilian coffee country. (*Nat. Geogr. Mag.*, Wash., 1911, XXII, 908-931, 19 fgs., map.) Details of coffee-growing and preparation for market. A few notes on laborers (p. 914), chiefly Italians.
- Waterman (T. T.)** The phonetic elements of the northern Paiute language. (*Univ. Calif. Publ. Amer. Arch. & Ethnol.*, Berkeley, 1911, X, 13-14, pl. 1-5.) Treats, with tracings, indications of lip positions, etc., the phonetic system of the northern Paiute language, the data having been obtained with the help of a full-blood, middle-aged Paiute named Dick Mahwee. Several types of consonants are absent from Paiute. Other features are a general lack of incisiveness in articulation, a very much later vocalization of sonants and very much less aspiration of surds than in English. Consonantal clusters do not occur, either initially or medially.
- Webster (H.)** The Nebraska Society of Ethnology and Folklore. (*Amer. Anthropol.*, Lancaster, Pa., 1910, N. S., XII, 730.)
- Wilder (H. H.)** A petroglyph from eastern Massachusetts. (*Ibid.*, 1911, N. S., XIII, 65-67, 1 pl., 1 fg.)
- Will (G. F.)** The Bourgeois village site. (*Ibid.*, 1910, N. S., XII, 473-476.)
- Wilson (J. G.)** The crossing of the races. (*Pop. Sci. Mo.*, Lancaster, Pa., 1911, LXXIX, 486-495.) In this "study of the general principles governing the successful intermixture of different peoples, with special reference to the question of immigration into the United States," Dr W. concludes that of the European immigrants, in so far as physical type is concerned, "that type of man best adapted physically to the climate and soil will, in the point of numbers, eventually predominate in spite of all restrictive legislation or man-made laws of any kind," and thus "the influence of immigration upon our physical type will, in the long run, be nil." The problem as to the influence of racial amalgamation upon habits of thought, morals, institutions, etc., is a much graver one, and here the Jew is the most serious obstacle, and he "will continue to be an unsolved and vexatious problem long after the Pole and the Hun and Italian are forgotten."
- Wissler (C.)** Anthropological field-work for the year. (*Amer. Museum J.*, N. Y., 1911, XI, 299-300, 2 fgs.) Work has been concentrated "on two main points, the systems of social groupings (or societies) and ritualistic forms." On p. 299 is an illustration of a Blackfoot woman praying to the setting sun.
- An Indian who helped the Museum. (*Ibid.*, 1910, X, 254-257.) Treats of The-Bear-One, a Piegan (Blackfoot) medicine man of the old type, from whom the American Museum of Natural History in New York received the important medicine bundles in the Plains collections. He has been painted by Sharp.
- The medicine pipe. (*Ibid.*, 1911, XI, 24-26.) Describes the obtaining from The-Bear-One of the long series of phonographic records of the ritual of the medicine-pipe now in possession of the Museum.
- Research and exploration among the Indians of the plains. (*Ibid.*, 126-127.) Brief account of work of Museum staff in this region 1906-1910.
- The social life of the Blackfoot Indians. (*Anthrop. Pap. Am. Mus. Nat. Hist.*, N. Y., 1911, VII, 1-64, 15 fgs.) Gives results of expedition of 1906,—most of the data is from the Montana Piegans. Tribal divisions (northern Blackfoot differ more from Piegan than latter from Blood), courtship (male usually aggressor; virginity highly esteemed; boys encouraged to take liberties) marriage and its obligations, plurality of wives (limited only by economic considerations), potential wives ("distant wives,"—sisters of wife), mother-in-law taboo, divorce, relationship (list of terms relating to males and females, p. 16), names, bands (imply not only bonds of friendship but bonds of blood; list of bands, p. 21), the camp-circle, tribal organization and control (head men of uncertain tenure, head-chief for each tribe,

everything of importance settled in council, organized men's societies, etc.) property rights (theoretically at least, women owned tipis, travois, horses ridden by them, domestic implements and clothing), division of labor, birth-customs (birth-marks evidence of re-birth), menstruation (no special taboo, except woman is not supposed to come near sick), care and training of children ("no definite evidences of puberty ceremonies aside from the boy's change of name"), death and mourning; tales of adventure (pp. 32-36), heraldry and picture-writing (decorations of tipi, records of war, capturing of horses, highly conventionalized symbols, sand-map, etc.), reckoning time (month-names, winter-count calendars, pp. 45-50), oaths (sun taken to witness), etiquette (visiting, hospitality, etc.), amusements and games (jokes common, pranks, etc.; game of tops, arrow-games, bows-and-arrows, wheel-game, ball, wrestling, "kicking," etc.), gambling (the hand-game and songs, wheel-gambling, four-stick game, etc.). As to gambling, etc., the Blackfoot "on the whole, seem to incline more toward the Plateau and Shoshone area than to the Siouan or Algonkin" (p. 62).

— Measurements of Dakota Indian children. (*Annals N. Y. Acad. Sci.*, 1911, XX, 355-364.) Discusses measurements (height, weight, chest) of 1,770 and 1,193 individuals out of totals of 5,242 full bloods and 1,877 mixed bloods at the Pine Ridge agency (chiefly Ogallala Teton), made by Dr J. R. Walker, for 13 years physician there. The statistics were compiled and studied by Dr Wissler in comparison with those of white children secured under similar conditions. In general the Dakota children are taller and heavier than white children, the mixed bloods standing between the two races; there is probably no difference in the time periods of growth for Indians and whites although there is a suggestion of a later maximum growth period for the

Indian; a slightly more rapid maturity for Indian children during the 15th and 16th years is suggested; variability for Indian children is less than for white; Dakota results contradict the idea that children of mixed parents are taller than either parent; the correlation values of the mixed blood do not tend toward an intermediate position between Indian and white; in both mixed bloods and Indians, the pre-adolescent acceleration is more in evidence than among white children.

Zeh (L. E.) Indian shorthand writers. (*So. Wkmn.*, Hampton, Va., 1911, XI, 480-485, 1 fg.) Treats of Father Le Jeune and his labors among the Indians, near Kamloops, B. C., to whom he taught a shorthand system of writing in which is published in the Chinook Jargon (pp. 482-483 are occupied with extracts), a paper of 16 pp., containing church and local information, etc., called the *Kamloops Wawa*; it is now printed from type specially made for the purpose. Some 2,000 Indians of this region read and write this shorthand.

— Reindeer progress in Alaska. (*Ibid.*, 610-615, 3 fgs.) Notes beneficial results. Last census showed 23,000 reindeer, of which 11,000 were owned by the natives. Of the 28 distributing stations 18 are owned by the Government and 10 by church missions. The Lapp herders often become owners. With careful training, the Eskimo boys make excellent herders, and can lasso better than the Laps. The use of reindeer-skin for clothing, etc., is important.

Zimmerman (J.) Hewers of stone. (*Nat. Geogr. Mag.*, Wash., 1910, XXI, 1002-1019, 9 fgs.) Treats of the ruins of Mitla, in Oaxaca, from personal observation and information from Prof. W. H. Holmes. The quarries, the temples, the mosaic fretwork, the cruciform cellars (or graves, perhaps), the palace, the hall of the 6 columns, etc., are described and figured.

ANTHROPOLOGIC MISCELLANEA

Mr Warren K. Moorehead and "The Stone Age in North America."
—The author of *The Stone Age in North America* is evidently displeased with my brief review of his work which appeared in the January–March number of this journal, and he presented an extended "reply" in the July–September issue. I regret having caused this displeasure, and am likewise surprised, as I regarded my criticisms of his work as being rather mild.

But really what does Mr Moorehead mean by "the stone age in North America"? He fails to recognize the age of stone as being an epoch in the cultural development of a people, beyond which no tribe in America had advanced at the time of the discovery. He fails to realize the fact that some tribes, within the United States, are still living in the stone age. He writes (vol. 1, p. 34): ". . . stone implements were in use in remote portions of the United States two centuries ago. . . ." The United States two centuries ago! But he fails to state that stone implements are even now made and used by some tribes.

And, likewise, Mr Moorehead has a curious conception of the people of the stone age: he appears to regard them as supernatural beings, for he says (vol. 1, pp. 92–94):

"As shedding some light on the use of such a knife, I was interested to read, when studying the accounts of early Spanish explorers, 1530–1540, to find a description of how such implements . . . were used in the Southwest. An ethnologist would have made great sacrifices to have been with Cabeza De Vaca. In his narrative he gives a description of a remarkable medicine-man. *This man represented the true Stone Age type*; although what we have concerning him is but a fragment, it is worthy of preservation in that it sheds light on the use of certain large flint implements, and on practices of ancient medicine-men.

"They said that a man wandered through the country whom they called Badthing; he was small of body and wore a beard, and they never distinctly saw his features. When he came to the house where they lived, their hair stood up and they trembled. Presently a blazing torch shone at the door, when he entered and seized whom he chose, and giving him three great gashes in the side with a very sharp flint, the width of the hand and two palms in length, he put his hand through them, drawing forth the entrails, from one of which he would cut off a portion more or less, the length of a palm, and throw it on the embers. Then he would give three gashes to an arm, the second cut on the inside of an elbow, and

would sever the limb. A little after this, he would begin to unite it, and putting his hands on the wounds, these would instantly become healed. They said that frequently in the dance he appeared among them, sometimes in the dress of a woman, at others in that of a man; that when it pleased him he would take a *buhio*, or house, and lifting it high, after a little he would come down with it in a heavy fall.'"

The author of the *Stone Age* evidently accepts this as fact, not fiction, and is of the belief that "this man represented the true Stone Age type." Therefore to this type of man he must attribute the mounds and earthworks, and the various objects found scattered over the surface. The stone age in North America must have been an age of fable, an age of mystery, not to be recognized unless there was a distinct reference to the use of a piece of stone. Mr Moorehead has probably gained his "clear perspective of the past in this country" (vol. I, p. 4) from studying the works of early Spanish writers.

In the "Conclusions" (vol. II, p. 348) our author deplores the fact that the early writers "did not give us more detail about stone-age times." But we find where he states (vol. I, p. 249) that, "entirely too much has been made of the fact that chipped implements of various kinds have been seen in the possession of modern Indians the past two hundred years." Such inconsistencies as these are characteristic of *The Stone Age in North America*.

This sentence occurs in the last paragraph of Mr Moorehead's reply: "There are also many observations which the school Mr Bushnell represents will regard askance, because that school sees nothing beyond the culture of historic Indians in America." Very true. "Many observations" appearing in the *Stone Age* might well have been made by a pseudo-scientist or a "real archeologist" of several generations ago, but it is difficult to understand why they should be presented in any work at the present time. As yet no generally acceptable evidence has been presented to prove the existence of so-called paleolithic man in America. No human remains have been discovered in any section of the country that exhibit characteristics differing from those of living tribes. Nothing has ever been found in the United States, either on or below the surface, the origin of which could not be justly attributed to either the living tribes or their ancestors. This applies to all earthworks as well as to small objects of stone, etc. Why, then, should some endeavor to draw a sharp distinction between archeology and ethnology when applied to the study of the arts of the North American Indians? The mere fact that an object is made of stone or some other hard material, and is found

on the surface or in a grave, is accepted by the "archeologist" as proof of great antiquity of the object, although many such specimens may date from the last century, may even have been made within a generation. Shell beads have been recovered from many burials in the area east of the Mississippi; many of these are undoubtedly less than two centuries old, yet they would be classed as "archeological material"; but how would the "real archeologist" classify the shell beads on the "habit" and "purse" now in the Ashmolean Museum, articles which were obtained in Virginia three centuries or more ago?

The questions presented by Mr Moorehead in his reply are not of sufficient importance to be treated in detail.

I see no reason for retracting a word of my review of Mr Moorehead's book, and, as I have already said, I regard the criticisms of his work as being rather mild. I reiterate the assertion made in the first paragraph of the review that "the pages are replete with inaccurate, misleading statements, rendering the work, for all practical purposes, quite valueless."

DAVID I. BUSHNELL, JR.

Some Shoshonean Etymologies.—"The origin of the term Shoshoni appears to be unknown. It apparently is not a Shoshoni word, and although the name is recognized by the Shoshoni as applying to themselves, it probably originated among some other tribe." (*Handbook of American Indians*; Bureau of American Ethnology, part II, p. 556.)

Repeated inquiries among the northern Paiute, of eastern Oregon, with whose language the writer is familiar, elicit but one answer as to the origin and meaning of the term Shoshoni. It is a Shoshonean word, and refers to the method of dressing the hair employed by the Shoshoni in former times. Captain Clark, in his work on the Indian Sign Language says: "The manner of dressing or wearing the hair in former years usually determined the tribe, the style in each being different." Further on, in reference to the sign of the Sioux, he proceeds to say: "To denote the Sioux (other than the Assinaboine branch), the Gros Ventres of the Prairie, Blackfeet, Flatheads, and some other tribes, in addition to above, bring palms of extended hands against top of head and move them down the sides, to indicate parting the hair in the middle and combing it down over the sides of the head." According to the Shoshoni, the Sioux "combed their hair like a woman," while the Shoshoni roached the forelock and rubbed it with the hand until it presented a tangled, curly appearance. From this characteristic arose the name "tsosóni," or

"curly-head," in contra-distinction to the term "tsopátakwünidi," "smooth-head," as the Sioux were sometimes called. The derivation is from tso, the head, and sóni, tangled, or curly. The Paiute word for curly-head is tsosónitukadi, which is from the same stems plus the pronominal-possessive suffix -tukádi.

As to the names Ute and Paiute, over which there has been much discussion, Captain Louey, a sub-chief of the Oregon Paiute, offers an explanation, which the writer has verified through other informants. He says that the name Ute is derived from the Shoshonean root yu, meaning like, or similar to, and ta, the first personal plural pronoun, and is equivalent to "like us," or "similar to us." The term Paiute is compounded of pa, water and yúta, and was formerly applied to those Indians of the Shoshonean stock whose home was on the eastern shore of Great Salt Lake. The Oregon Shoshoneans call the Ute Pakwítzimina, from pakwí, fish, and tzimína, to unjoint. The name arose from the habit of the Ute of unjointing the vertebrae of the fish for the purpose of making beads.

As to the term yúta, while its meaning may be translated into English by the Indian as "like us," "similar to us," the writer is of the opinion that the real etymology of the word is derivable from the root yu, meaning like, or similar, and the Shoshonean pronominal suffix -ta, meaning "the one who," the equivalence being, "the one who is like (us)." The genius of the language would make this the more probable view.

The Oregon Paiute repudiate the name "Paiute," although they recognize it as applicable to those Shoshoneans who lived near Great Salt Lake, and who called themselves Paiyúta.

W. L. MARSDEN.

A Tentative List of the Hispanized Chumashan Place-Names of San Luis Obispo, Santa Barbara, and Ventura Counties, California.—Will persons familiar with Spanish family names and place names kindly inform the writer if any of the words in the following list are not of Chumashan Indian origin?

Anacápa, one of the Channel Islands.

Anapamú, name of a street in Santa Barbara, always said by the Spanish population to be of Indian origin.

Camúlos, a town on the railroad in the Santa Clara River valley, Ventura County, above Santa Paula.

Cayúcas, a town on the coast north of El Morro in San Luis Obispo County. Although the Spanish-speaking people say that this is an

Indian word, Spanish dictionaries give *cayuca* as a word meaning "head" in the Cuban dialect of Spanish.

Huenéme, a town on the coast near Oxnard, Ventura County.

Lompóc, a town in the lower Santa Ynez River valley.

Magú, a point on the coast in Ventura County, south of Huenéme.

Matílija, a large canyon in the vicinity of the lower Ojai valley, Ventura County.

Montálvo, a town in the Santa Clara River valley, Ventura County, below Santa Paula.

Nojohuí, a beautiful waterfall, canyon, and creek in the Santa Ynez Mountains, Santa Barbara County, between Las Cruces and Santa Ynez.

Ójai, the name of two valleys in Ventura County, known respectively as the Lower Ojai and the Upper Ojai.

Pirú, a canyon, creek, and town in Ventura County, northeast of Santa Paula.

Pismo, a beach in Santa Barbara and San Luis Obispo counties extending from the mouth of the Santa Maria River to the vicinity of Pismo town.

Séspe, a long cañada and canyon in Ventura County, emptying into the Santa Clara River above Santa Paula.¹

Simí, a large valley and a town in Ventura County encircled by the Santa Susana Mountains and Oak Ridge.

Tápo, a canyon and ranch in the Santa Susana Mountains northeast of Simi town, Ventura County. Mr Guadalupe Perea, whose family has lived long in this vicinity, declares that this word is of Chumashan Indian origin.

Topatópa, a conspicuous peak north of Santa Paula, Ventura County.

Záca, a lake and a region in the Zaca Lake Forest Reserve, Santa Barbara County.

JOHN P. HARRINGTON.

THE *Harvard University Gazette* records among the activities of the Peabody Museum that during the summer Dr Alfred M. Tozzer and Mr Clarence L. Hay made a trip to Mexico. Mr Hay purchased a valuable collection which he has given to the museum. Dr Charles Peabody represented the museum at the Prehistoric Congress of France, held at Nimes in August, 1911, and presented a paper on "The Archeology of the Delaware Valley," with special reference to the work of Mr

¹"Sesepe river" (misprint?), D. P. Barrows, *The Ethno-Botany of the Coahuilla Indians of Southern California*, Chicago, 1900, p. 73, quoting Taylor, *California Farmer*, vol. XVI, no. 15.

Ernest Volk. While in Europe Dr Peabody visited several prehistoric sites, and collected, with the assistance of his European colleagues, representative specimens from the eocene, pseudo-eolithic site of Clermont-de-l'Oise; the eolithic industries of Salinelles (Gard); the industries, neolithic and others, near Orpierre (Hautes Alpes); the Lake Dweller stations of the Saut de la Pucelle and of La Gresine, Lac du Bourget (Savoie). The research in relation to the antiquity of man in America was continued in the Delaware Valley by Mr Ernest Volk, and a report by Mr Volk on the twenty-two years of research in this region has been published by the museum. Dr George P. Howe conducted an expedition to Yucatan and has prepared a report on the results. Mr Samuel J. Guernsey carried on archeological researches in New Brunswick for the museum. The museum had a party in Ohio under the direction of Mr B. W. Merwin, and the long-continued exploration of the ancient cemetery at Madisonville, as well as of the famous Turner Group of mounds in the same region, has been completed.

THE *American Museum Journal* reports that Mr Stefánsson, of the museum's Arctic expedition, has made a discovery of an archeological nature at his last winter camp near Pt. Stevens, Parry Peninsula. According to his report a great deal of pottery is found upon old village sites, some at a depth of several feet. This pottery is of similar type to that found among and lately manufactured by some of the Alaskan Eskimo. Pottery has so far not been reported from any of the central and eastern Eskimo. It was formerly assumed that the presence of pottery among the Alaskan Eskimo was to be explained as indicating forms copied from Siberian or neighboring American tribes. The recent discoveries of Mr Stefánsson indicate that the art of pottery among the Eskimo must have been of ancient origin and at one time very widely distributed. Furthermore Mr Stefánsson reports that other objects he finds are similar in type to those described by Professor Boas, discovered by Captain George Comer in ancient village sites on Southampton Island, Hudson Bay. These were also similar to objects recently discovered in Greenland, leading to the conclusion that older types of Eskimo culture must have been much more uniform throughout the entire stretch of Arctic America than at present. Mr Stefánsson's find of similar objects on the west side of Hudson Bay makes it more probable that there was formerly but a single type of Eskimo culture from Alaska to Greenland.

DR DAVID STARR JORDAN, of Stanford University, one of the vice-presidents of the first international eugenics congress to be held at the

University of London from July 24 to 30, 1912, has accepted the presidency of the consultative committee for the United States. The officers of the congress hope that it will result in a far wider recognition of the necessity for an immediate and serious consideration of eugenic problems in all civilized countries. The proof of this necessity must be based on the laws of heredity, on the history of the changes in racial characteristics in the past, and on what is known concerning the effect of all the many biological and social factors which tend either to improve or deteriorate the innate qualities of mankind. If this field should be covered in a wide and comprehensive manner in the papers presented to the congress, including an adequate discussion of the general nature of the reforms, moral and legislative, necessary for insuring the progress of the race, the records of the proceedings would form a presentment of the case for eugenic reform which would assuredly be of great value to both the legislator and the social reformer. To achieve such a result should be the main object, rather than the attempt to make the congress an arena for the discussion of academic questions mainly of interest to scientific investigators.—*Science*.

THE Bureau of American Ethnology is preparing a new work which will form a "Handbook of Aboriginal Remains in the United States," and will have to do with the ancient abodes, camps, mounds, workshops, quarries, burial places, etc., of the Indian tribes. In connection with this work, Mr F. W. Hodge, Ethnologist-in-charge of the Bureau of American Ethnology, is sending letters of inquiry to all persons thought to have any knowledge of the subject of this undertaking, as well as to all institutions and societies interested in American archeology and ethnology. The letter requests all information respecting the location, character, and history of the remains left by the Indians, or other indications of their former occupancy. In 1891 a catalogue of prehistoric works east of the Rocky Mountains was published, but that work is both out of date and out of print. It was compiled by Dr Cyrus Thomas and several collaborators. It is not expected that the prospective work on Indian antiquities will be issued for many months. Following the precedent of the old report, the new one in contemplation, will show, to even a greater and more extensive end, all available information. It is proposed to classify the former Indian remains by states and counties, and to illustrate the publication with maps, photographs and drawings.

THE *American Museum Journal* states that in revising the installation

of the New Guinea material in the South Sea hall, Doctor Lowie is making extensive use of the sketches secured by the museum with the Finsch collection. Dr Otto Finsch, the celebrated naturalist and traveler, provided with the collection a very full series of illustrations accurately picturing many phases of native life. These are highly desirable, as many aspects of aboriginal culture, such as house and boat types, can not always be readily transported or even secured in model specimens, although often they form the most characteristic elements of the culture of a tribe. This applies even more emphatically to social and ceremonial life, which can be studied very inadequately, if at all, from museum specimens. It also applies in large measure to objects of personal adornment and clothing. For instance, it would not be at all obvious to the average visitor how the aborigines wore a profusely decorated heart-shaped object conspicuously exhibited in one of the New Guinea cases. A glance at the sketch now beside the specimen shows it to be a warrior's breast ornament. Similar results have been accomplished with other articles of dress which otherwise could not readily be understood except with the aid of long explanatory labels.

PROFESSOR HENRY WILLIAMSON HAYNES, well known for his investigations in archeology, died at his home in Boston on February 15, aged eighty years. Professor Haynes was for years a member of the Anthropological Society of Washington and he was a founder of the American Anthropological Association. In accordance with the terms of his will \$1,000 are bequeathed to the Peabody Museum of Harvard University for the library together with all his prehistoric and archeological objects, and his books and pamphlets relating to such subjects. To the Boston Society of Natural History is given his fossils, minerals, and other objects of natural history. To Harvard College is given, for its classical department, Mr Haynes' Etruscan, Greek, and Roman vases and his ancient coins and medals. The Boston Museum of Fine Arts is to receive his Egyptian antiquities, except those relating to the age of stone in Egypt, which go to the Peabody Museum.

THE program for the 457th regular meeting of the Anthropological Society of Washington, held January 16, consisted of a paper on "The Western Neighbors of the Prehistoric Pueblos," by Dr J. Walter Fewkes, and a paper on "The Hammurabic and Modern Codes," by Mr George R. Stetson. The address of the retiring President, Dr J. Walter Fewkes, was delivered on February 20, the subject being "Great Stone Monuments in History and Geography."

DR J. WALTER FEWKES of the Bureau of American Ethnology has been re-elected president of the American Anthropological Association. The next annual meeting of the Association will be held in Cleveland, Ohio, beginning December 30, 1912, in affiliation with Section H of the American Association for the Advancement of Science.

MR N. C. NELSON, Instructor in Anthropology in the University of California, has been appointed Assistant Curator in the Department of Anthropology, American Museum of Natural History. He will assume his duties next June and will give especial attention to North American archeology.

THE plant and fixtures of the old *Cherokee Advocate* were sold at auction at Tahlequah, Okla., December 6, 1911, for \$151. The purchaser was J. F. Holden, editor of the *Ft. Gibson Era* who has done much in the past to preserve the historic relics of the old Indian Territory.

FREDERICK STARR, Associate Professor of Anthropology at the University of Chicago, returned on January 1 from a four months' journey through Korea. Professor Starr has been made a Commander of the Order of Leopold II, by King Albert of Belgium.

THE Fourteenth International Congress of Anthropology and Pre-historic Archeology will be held at Geneva, Switzerland, during the first week of September, 1912. The last session of this Congress was held at Monaco in the spring of 1906.

DR MAX UHLE has resigned the directorship of the Museo de Historia Nacional at Lima, Peru, and accepted an offer of the Chilean Government to take charge of the archeological research of the latter country, with headquarters at Santiago.

PROFESSOR GEORGE GRANT MACCURDY is one of the contributors to *The American Year Book* (D. Appleton and Co.) for 1911, recently issued, his article being that on "Anthropology, Ethnology, and Pre-historic Archeology."

MR W. LEO BULLER has presented to the Dominion Museum, Wellington, New Zealand, a collection of about 700 Maori ethnological specimens which had been collected by his father, Sir Walter Buller.

PROFESSOR GEORGE GRANT MACCURDY will be the delegate from Yale University to the Eighteenth International Congress of Americanists to be held in London, May 27 to June 1, 1912.

THE death is announced of Dr L. Pič, the noted Bohemian archeologist, in charge of the unsurpassed archeological collection of the Museum Regni Bohemiae, Prague.

PROFESSOR RICHARD ANDRÉE, of Leipzig, known for his work in geography and ethnography, has died at the age of seventy-seven years.

KNIGHTHOOD has been conferred on Professor E. B. Tylor, F.R.S. Emeritus Professor of Anthropology in the University of Oxford.

PROFESSOR W. BALDWIN SPENCER, F.R.S., has been appointed protector of the aborigines in the northern territory of Australia.

DR. SCHLAGINHAUFER has been chosen as the successor of Dr R. Martin at the head of the Anthropological Institute, Zurich.

PROFESSOR KARL PEARSON is preparing a memoir on the life and work of the late Sir Francis Galton.

M. PAUL TOPINARD, the distinguished French anthropologist, has died at the age of eighty-one years.

INDEX TO AUTHORS AND TITLES

- ABORIGINAL REMAINS in the Champlain valley, 239
 — in the United States, Handbook of, 728
 ALIKULUFAN, see TIERRA DEL FUEGO
 ALLEN, ARTHUR A., explorations, 343
 AMEGHINO, FLORENTINO, death, 500
 AMERICAN ANTHROPOLOGICAL ASSOCIATION, anthropology at the Providence meeting with proceedings of the, 99
 — meetings, 337, 730
 — officers and members, 181
 AMERICAN ANTIQUARIAN AND ORIENTAL JOURNAL, editorial changes, 177
 AMERICAN ETHNOLOGICAL SOCIETY, meeting, 177
 AMERICAN INDIAN ASSOCIATION, foundation, 342
 AMERICAN MUSEUM OF NATURAL HISTORY, collections, 340, 728
 AMERICANISTS, the eighteenth congress of, 343
 ANDRÉE, RICHARD, death, 731
 ANTHROPOLOGICAL SOCIETY OF WASHINGTON, meetings, 177, 179, 499, 729
 — proceedings, 313
 ANTHROPOLOGY at the Providence meeting with proceedings of the American Anthropological Association for 1910, 99
 ARCHEOLOGICAL EVIDENCE as determined by method and selection, 445
 ATACAMAN, see PUELCHÉAN
 ATACAMEÑAN, see PUELCHÉAN
 AVEBURY, Lord, work by reviewed, 623

 BARBEAU, C. M., field work, 175
 BARNARD, WILLIAM CLARK. A rare Missouri flint, 172
 BARTON, F. R., see SELIGMANN
 BEAN, R. B., work by reviewed, 153
 BEARFOOT, REV. ISAAC, death, 180
 BEDDOE, JOHN, death, 344
 BINGHAM, HIRAM, work by reviewed, 138
 BLAKE, FRANK R., Philippine literature, 449. Review by, 472
 BOAS, FRANZ, honors, 344, lecture before National Academy of Sciences, 179, reviews by, 334, 478
 BOYLE, DAVID, obituary notice, 159
 BRANNER, JOHN C., expedition of, 179
 BRETON, A. C., describes American museums, 343
 BRITISH MUSEUM collections, 176

 BROWN, GEORGE, work by reviewed, 139
 BROWNE, HERBERT JANVRIN. The stone collars and three-pointed stones of the West Indies, 489
 BUDGE, E. A. WALLIS, work by reviewed, 615
 BULLER, W. LEO, collection, 730
 BULU KNOWLEDGE of the gorilla and chimpanzee, 56
 BUSHNELL, JR., D. I. New England names, 235. Mr Warren K. Moorehead and "The Stone Age in North America," 722. Review by, 154

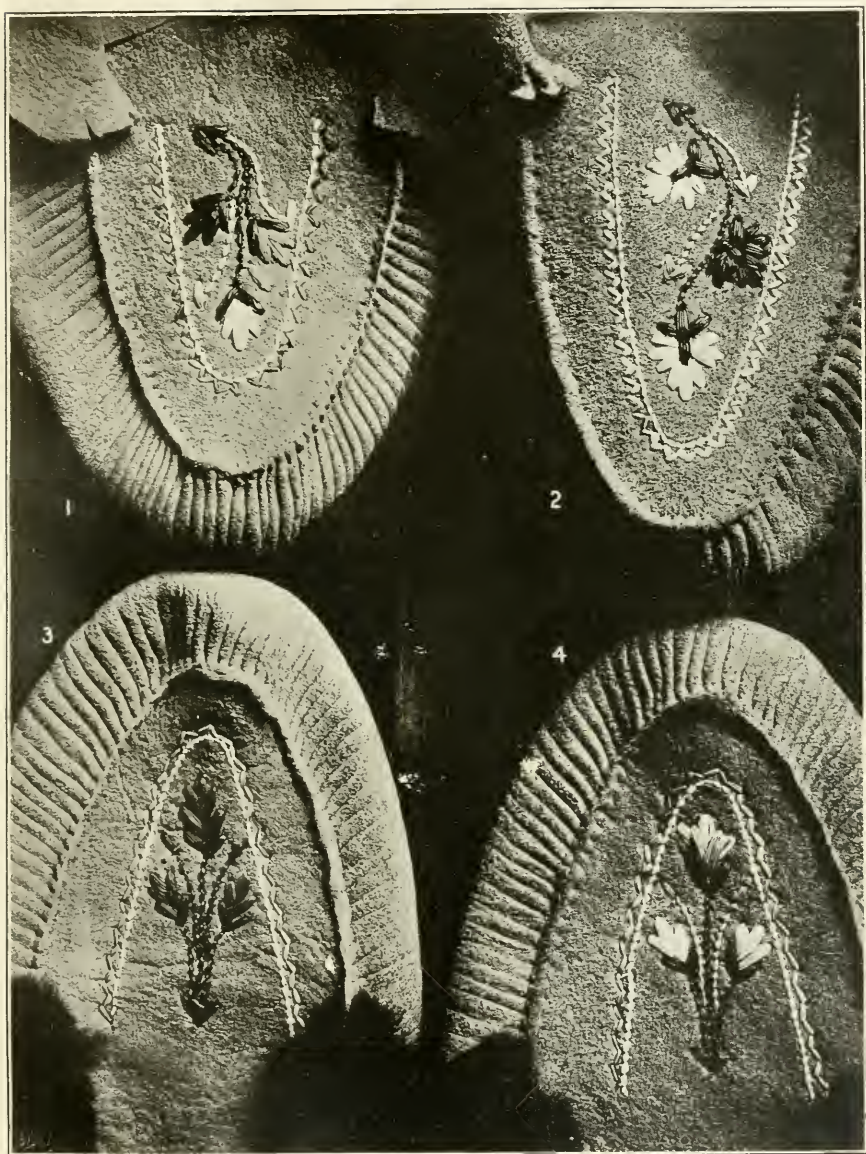
 CANADIAN GOVERNMENT, anthropological work under the, 496
 CASANOWICZ, I. M., review by, 615
 CERRALBO, MARQUIS OF, discovery by, 179
 CHAMBERLAIN, ALEXANDER F. The present state of our knowledge concerning the three linguistic stocks of the region of Tierra del Fuego, South America, 89. On the Puelchean and Tsonekan (Tehuelchean), the Atacameñan (Atacaman) and Chonoan, and the Charruan linguistic stocks of South America, 458. Bibliography of periodical literature, 625. Appointment, 500. Honors, 180, 344. Obituary notice of David Boyle, 159. Reviews by, 149, 150, 152
 CHAMPLAIN VALLEY, aboriginal remains in the, 239
 CHARRUAN, see PUELCHÉAN
 CHEROKEE ADVOCATE, disposal of plant, 730
 CHIMPANZEE, see GORILLA
 CHONOAN, see PUELCHÉAN
 CHUMASHAN PLACE-NAMES of San Luis Obispo, Santa Barbara, and Ventura counties, California, a tentative list of the Hispanized, 725
 COLE, E. MAULE, collections, 344
 CONANT, C. E., work by reviewed, 472
 CONGRÈS PRÉHISTORIQUE DE FRANCE, the seventh meeting of the, 177
 COOK, CAPTAIN, statue of, 178
 CRIMINAL ANTHROPOLOGY, the seventh international congress for, 344
 CRIMINAL LABORATORY, bill for the establishment of a, 179
 CURTIS, EDWARD S., work by reviewed, 609

- DANISH ROYAL GEOGRAPHICAL SOCIETY, expedition by, 178
- DARBISHIRE, A. D., appointment, 178
- DENNETT, R. E., work by reviewed, 481
- DILLENIUS, J. A., work by reviewed, 331
- DIXON, R. B., reviews by, 138, 139, work by reviewed, 141
- EARTHWORKS OF EASTERN MASSACHUSETTS, certain, 566
- EMMONS, G. T. Native account of the meeting between La Perouse and the Tlingit, 294
- ENCYCLOPEDIA BRITANNICA, anthropology in, 617
- ESPERANTO CONGRESS, seventh annual, 341
- EUGENICS, recent developments, 727, congress, 731
- EXOGAMY AND TOTEMISM DEFINED: a rejoinder, 589
- FARABEE, WM. CURTIS, reviews by, 473, 609
- FEWKES, J. WALTER, election, 730, field work, 179
- FIELD MUSEUM OF NATURAL HISTORY, activities of the anthropological department, 168
- FISHBERG, MAURICE, work by reviewed, 320
- FLINT, a rare Missouri, 172
- FORM OF THE HEAD, Professor Boas' new theory of the, 394
- FOUR SEASONS OF THE MEXICAN RITUAL OF INFANCY, the, 229
- FRANCISCAN FATHERS, a key to the Navaho pronunciation employed by the, 164
- work projected by, 342
- FUTURE OF THE INDEPENDENT MODE IN FOX, on the, 171
- GALTON, SIR FRANCIS, will of, 180
- GALTON LABORATORY, subscriptions for, 500
- GAUD, FERNAND, work by reviewed, 483
- GERARD, W. R. Kalamazoo, 337
- GERMAN AND VIENNESE ANTHROPOLOGICAL SOCIETY, the fifth general congress of the, 176
- GODDARD, P. E., field work, 177
- GOLDENWEISER, A. A. Exogamy and totemism defined: a rejoinder, 589. Activities, 344. Reviews, 121, 598
- GORDON, G. B., papers by, 178
- GORILLA AND CHIMPANZEE, Bulu knowledge of the, 56
- HADDON, KATHLEEN, work by reviewed, 334
- HAGAR, STANSBURY. The four seasons of the Mexican ritual of infancy, 229
- HALKIN, JOSEPH, work by reviewed, 483
- HARRINGTON, JOHN P. A key to the Navaho orthography employed by the Franciscan Fathers, 164. The numerals "two" and "three" in certain Indian languages of the Southwest, 167. The origin of the names Ute and Paiute, 173. A tentative list of the Hispanized Chumashan place-names of San Luis Obispo, Santa Barbara, and Ventura counties, California, 725
- HARRINGTON, M. R., appointment, 344, note by, 178
- HARTLAND, E. S., work by reviewed, 598
- HAYNES, HENRY W., death of, 729
- HODGE, F. W., field work, 499
- HOUGH, WALTER, obituary notice of Edward Palmer, 173, reviews by, 330
- HOWE, GEORGE P. The ruins of Tuloom, 539. Awarded fellowship, 500
- HRDLÍČKA, ALEŠ, address by, 176, honors, 179, paper by, 177, review by, 320
- HUNTINGTON, E., explorations, 180
- HURON MOOSE HAIR EMBROIDERY, 1
- HURON, notes on the material culture of the, 208
- IMPERIAL BUREAU OF ANTHROPOLOGY, foundation urged, 342
- INCORPORATION as a linguistic process, 577
- INSTITUTE OF HUMAN PALEONTOLOGY, foundation of, 342
- INTERNATIONAL CONGRESS OF ANTHROPOLOGY and Prehistoric Archeology, session of, 730
- INTERNATIONAL SCHOOL OF AMERICAN ARCHEOLOGY and ETHNOLOGY, address of E. Seler before, 177
- IROQUOIS SILVERSMITHING, additional notes on, 283
- JENKS, ALBERT ERNEST. Bulu knowledge of the gorilla and chimpanzee, 56. Review by, 136
- JEVONS, F. B., work by reviewed, 620
- JOHNSON, I. P., work by reviewed, 322
- JOURNAL OF RELIGIOUS PSYCHOLOGY, changes in, 500
- JOYCE, J. A., see TORDAY, E.
- KADO or Sun dance of the Kiowa, notes on the, 345
- KALAMAZOO, meaning, 337
- TEN KATE, H., review by, 331
- KOCH-CRUENBERG, THEODOR, expedition, 341
- KROEBER, A. L. Phonetics of the Micronesian language of the Marshall Islands, 380. Incorporation as a linguistic process, 577

- LAMB, D. S., paper by, 177
- LAMERE, OLIVER (and Paul Radin). Description of a Winnebago funeral, 437
- LA PEROUSE and the Tlingit, native account of the meeting between, 294
- LEÓN, NICOLAS, appointment, 344, work by reviewed, 149
- LE ROY, A., work by reviewed, 144
- LÉVY-BRUHL, L., work by reviewed, 121
- LOMBROSO, CESARE, monument to, 344
- LOWIE, R. H. A new conception of totemism, 189. Field work, 177. Reviews by, 130, 324, 623
- VON LUSCHAN, F., delivers Huxley memorial lecture, 500
- MACCURDY, G. G. Anthropology at the Providence meeting with proceedings of the American Anthropological Association for 1910, 99. Appointed assistant professor, 180. Delegate, 730. Contributes to *The American Year Book*, 730. Reviews by, 322, 607
- MARKHAM, CLEMENTS, work by reviewed, 473
- MARSDEN, W. L. Some Shoshonean etymologies, 724
- MARSHALL ISLANDS, phonetics of the Micronesian language of the, 380
- MARTIN, RUDOLF, resignation, 178
- MASON, J. ALDEN, honors, 178
- MATERIAL CULTURE OF THE HURON, notes on the, 208
- MAYA ARCH, the genesis of the, 501
- MENOMINEE TALES, 68
- MENOMINI, a comparative sketch of the, 551
- Indians, war customs of the, 299
- MEXICAN RITUAL OF INFANCY, the four seasons of the, 229
- MEYER, A. B., death, 180
- MICHELSON, TRUMAN. Menominee tales, 68. Note on the gentes of the Ottawa, 338. On the etymology of the Natick word *kompau*, 'he stands erect,' 339. On the future of the independent mode in Fox, 171. Field work, 177. Review by, 326
- MICRONESIAN LANGUAGE of the Marshall Islands, phonetics of the, 380
- MILLS, WILLIAM C., review by, 606
- MISSOURI VALLEY IN NORTH DAKOTA, a new feature in the archeology of the, 585
- MOONEY, JAMES, field work, 177
- MOOREHEAD, WARREN K. Mr Bushnell's review of "The Stone Age," 494. Work by reviewed, 153.
- MOOSE HAIR EMBROIDERY, Huron, 1
- MORICE, A. G., appointment, 178, loss of establishment, 176
- MUSEO NACIONAL OF MEXICO, new officers, 344
- NATICK WORD *KOMPAU*, 'he stands erect,' on the etymology of the, 339
- NAVAHO ORTHOGRAPHY employed by the Franciscan Fathers, a key to the, 164
- NELSON, N. C., appointment, 730
- NEW ENGLAND NAMES, 235
- NEW YORK ACADEMY OF SCIENCES, Section of Anthropology and Psychology of the, 177
- NEW YORK STATE COLLECTIONS in archeology and ethnology in the capitol fire, fate of the, 169
- NOOTKA LANGUAGE AND CULTURE, some aspects of, 15
- NOUN INCORPORATION in American languages, the problem of, 250
- NUMERALS "TWO" AND "THREE" in certain Indian languages of the Southwest, the, 167
- ONAN, see TIERRA DEL FUEGO
- OTTAWA, note on the gentes of the, 338
- VAN OVERBERGH, CYR., reviews of works by, 148, 483
- PAIUTE, see UTE
- PALMER, EDWARD, obituary notice of, 173
- PARKER, A. C. Additional notes on Iroquois silversmithing, 283. Fate of the New York state collections in archeology and ethnology in the capitol fire, 169. Work by reviewed, 135
- PARKER, QUANAH, death of, 180
- PEABODY MUSEUM OF AMERICAN ARCHEOLOGY AND ETHNOLOGY, activities, 726, field work, 175
- PEARSON, KARL, appointment, 344, prepares memoir of Galton, 731
- PERIODICAL LITERATURE, bibliog. of, 625
- PERKINS, G. H. Aboriginal remains in the Champlain valley, 239
- PETROGLYPH from eastern Massachusetts, a, 65
- PHILIPPINE LITERATURE, 449
- PIČ, L., death, 731
- PINAUT, ALPHONSE LOUIS, death of, 179
- PLACERES DEL ORO, State of Guerrero, Mexico, an ancient sepulcher at, 29
- PLANET, publications of results of explorations of the, 343
- PROVIDENCE MEETING, see ANTHROPOLOGY

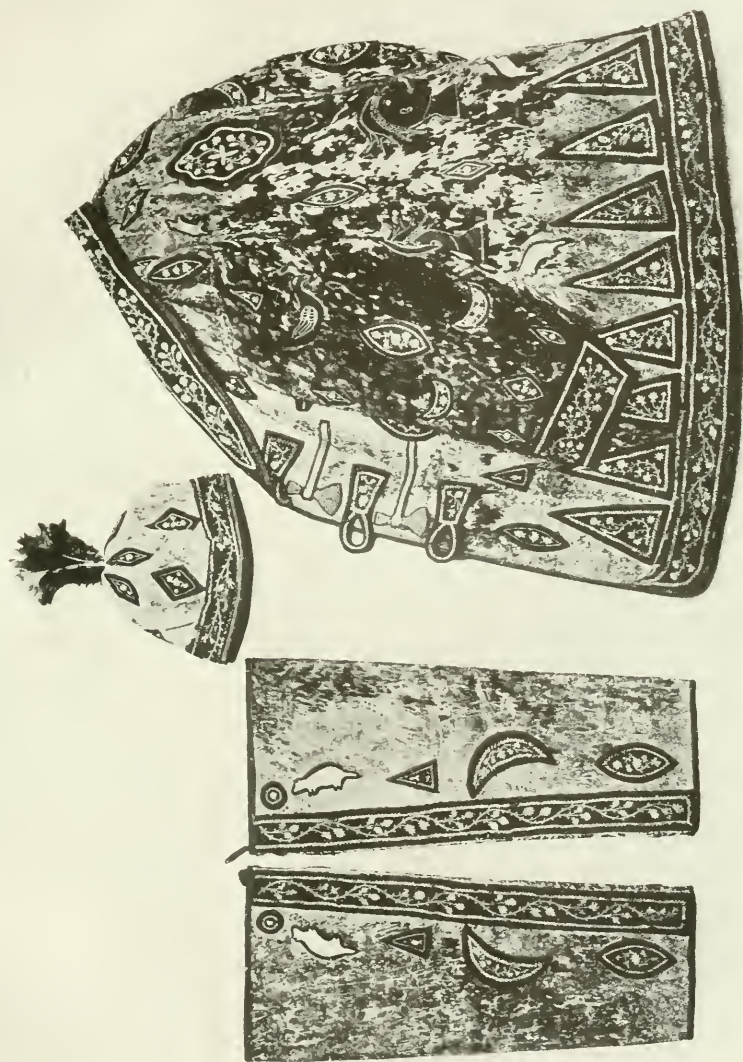
- PUELCHÉAN AND TSONEKAN (Tehuelchean), the Atacameñan (Atacaman) and Chonoan, and the Charruan linguistic stocks of South America, the, 458
- RADIN, PAUL. Some aspects of Winnebago archeology, 517. Field work, 177. See Lamere, Oliver
- RADOSAVLJEVICH, PAUL R. Professor Boas' new theory of the form of the head—a critical contribution to school anthropology, 394. Lectures by, 178
- ROTH, WALTER E., work by reviewed, 330
- ROUTLEDGE, W. SCORESBY and KATHERINA, work by reviewed, 130
- RURIK, explorations to find burial place of, 344
- RUTOT, A., work by reviewed, 607
- SAPIR, EDWARD. Some aspects of Nootka language and culture, 15. The problem of noun incorporation in American languages, 250. Review by, 141
- SARAWAK MUSEUM, Journal of the, 177
- SARG, FRANCIS C. A., work by reviewed, 330
- SCHLAGINHAUFER, Dr, chosen head of Anthropological Institute, Zurich, 731
- SCHOOL OF AMERICAN ARCHEOLOGY, the activities, 339, announcement, 174. field work, 174, acquires library of Professor Finck, 179
- SCOTT, HUGH LENOX. Notes on the Kado or Sun dance of the Kiowa, 345
- SELER, E., address by, 127, discovery by, 179
- SELIGMANN, C. S., work by reviewed, 136
- SHOSHONEAN ETYMOLOGIES, some, 724
- SILVERSMITHING, see IROQUOIS
- SKINNER, ALANSON. War customs of the Menomini Indians, 299. A comparative sketch of the Menomini, 551
- SMITH, HARLAN I. Archeological evidence as determined by method and selection, 445. Appointment, 343. Lectures by, 500. Work by reviewed, 606
- SPECK, FRANK G. Huron moose hair embroidery, 1. Notes on the material culture of the Huron, 208. Papers by, 178. Review by, 135
- SPENCER, BALDWIN, field work, 344
- SPENCER, W. BALDWIN, mentioned, 731
- SPINDEN, HERBERT J. An ancient sepulcher at Placeres del Oro, State of Guerrero, Mexico, 29
- STARR, FREDERICK, honors, 730, reviews by, 144, 146, 148, 480, 481, 483, work by reviewed, 152
- STEFÁNSSON, discoveries, 727
- STEVENSON, Mrs M. C., field work, 179
- STONE COLLARS AND THREE-POINTED STONES of the West Indies, the, 489
- SUN DANCE, see KADO
- TEHUELCHÉAN, see PUELCHÉAN
- TENIŠEVA, DUCHESS M. D., gift by, 176
- "THE STONE AGE," Mr Bushnell's review of, 494
- "THE STONE AGE IN NORTH AMERICA." Mr Warren K. Moorehead and, 722
- THOMPSON, EDWARD H. The genesis of the Maya arch, 501
- THONNER, FRANZ, work by reviewed, 146
- THREE-POINTED STONES, see STONE COLLARS, etc.
- TIERRA DEL FUEGO, South America, the present state of our knowledge concerning the three linguistic stocks of the region of, 89
- TOPINARD, PAUL, death of, 731
- TORDAY, E. (and J. A. Joyce), work by reviewed, 478
- TOTEMISM, a new conception of, 189. See Exogamy
- TOZZER, A., honors, 179
- TREMEARNE, A. J. N., work by reviewed, 480
- TSONEKAN, see PUELCHÉAN
- TULOOM, the ruins of, 539
- "TWO" AND "THREE" in certain Indian languages of the Southwest, the numerals, 167
- TYLOR, E. B., honors, 731
- UHLE, MAX, appointment, 730, field work, 179
- UHLÉNBECK, C. C., works by reviewed, 324, 326
- UNIVERSAL RACES CONGRESS, the first, 178
- UNIVERSITY OF CALIFORNIA, the Museum of Anthropology of the, 498
- UTE AND PAIUTE, origin of the names, 173
- VAN DEN PLASS, JOSEPH, work by reviewed, 483
- VIAENE, ERNEST, work by reviewed, 483
- WALLIS, W. D., reviews by, 617, 620, 621
- WAR CUSTOMS OF THE MENOMINI INDIANS, 299
- WATERHOUSE, ERIC S., work by reviewed, 621
- WEBSTER, HUTTON, activities, 344, 500
- WELD, CHARLES G., bequests, 343

- WILDER, HARRIS HAWTHORNE. A petroglyph from eastern Massachusetts, 65
- WILL, GEORGE F. A new feature in the archeology of the Missouri valley in North Dakota, 585
- WILLOUGHBY, CHARLES C. Certain earthworks of eastern Massachusetts, 566
- WINNEBAGO ARCHEOLOGY, some aspects of, 517
- WINNEBAGO FUNERAL, description of a, 437
- YAHGANAN, see TIERRA DEL FUEGO

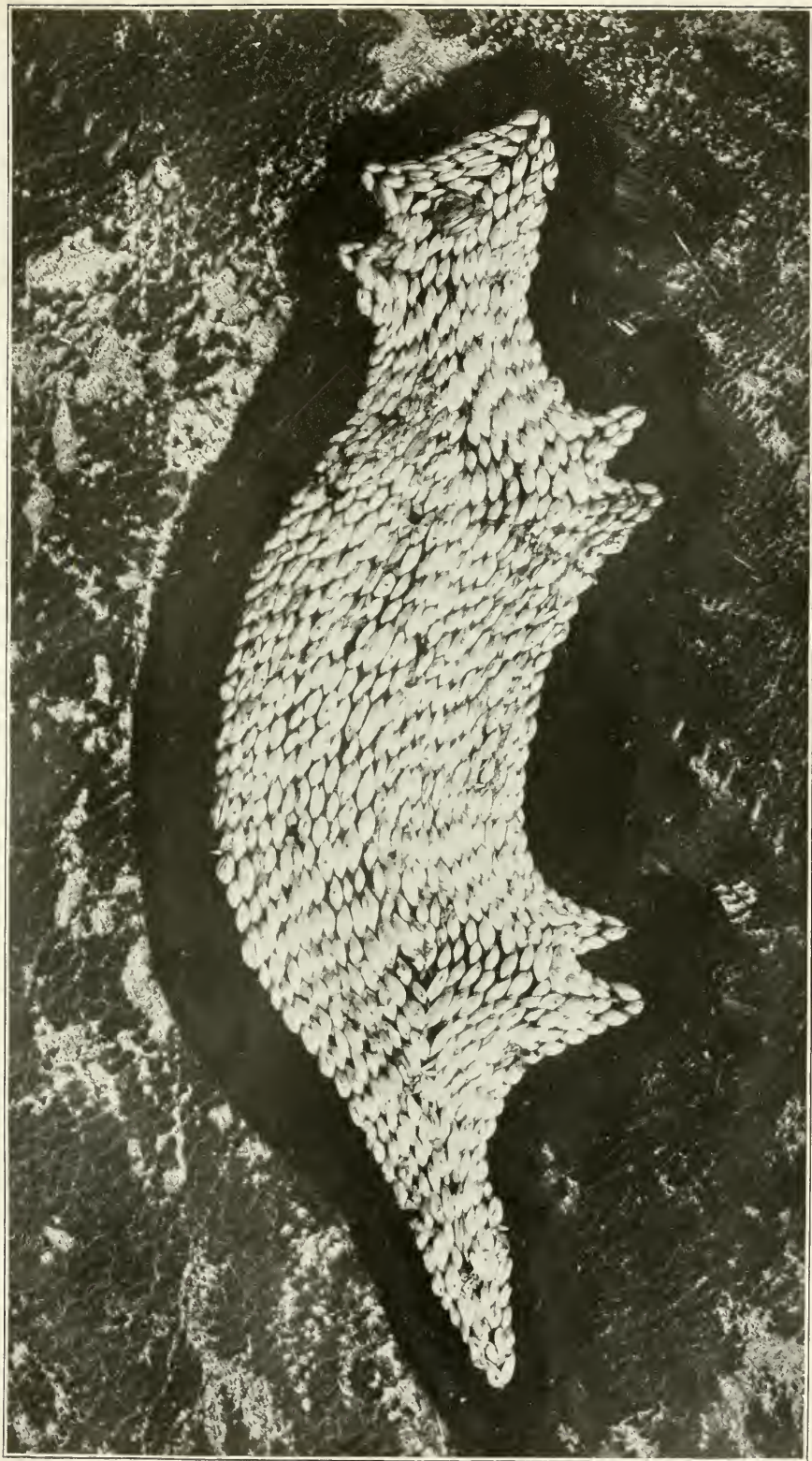


HURON MOOSE HAIR MOCCASIN PATTERNS





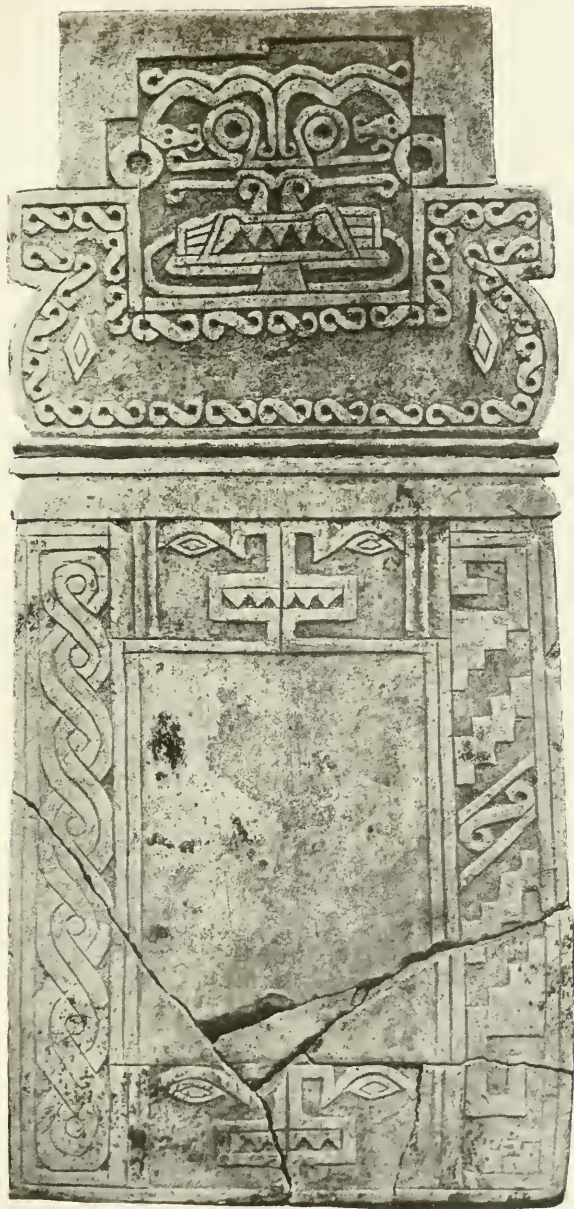
HURON SEAL SKIN COSTUME WITH MOOSE HAIR EMBROIDERY



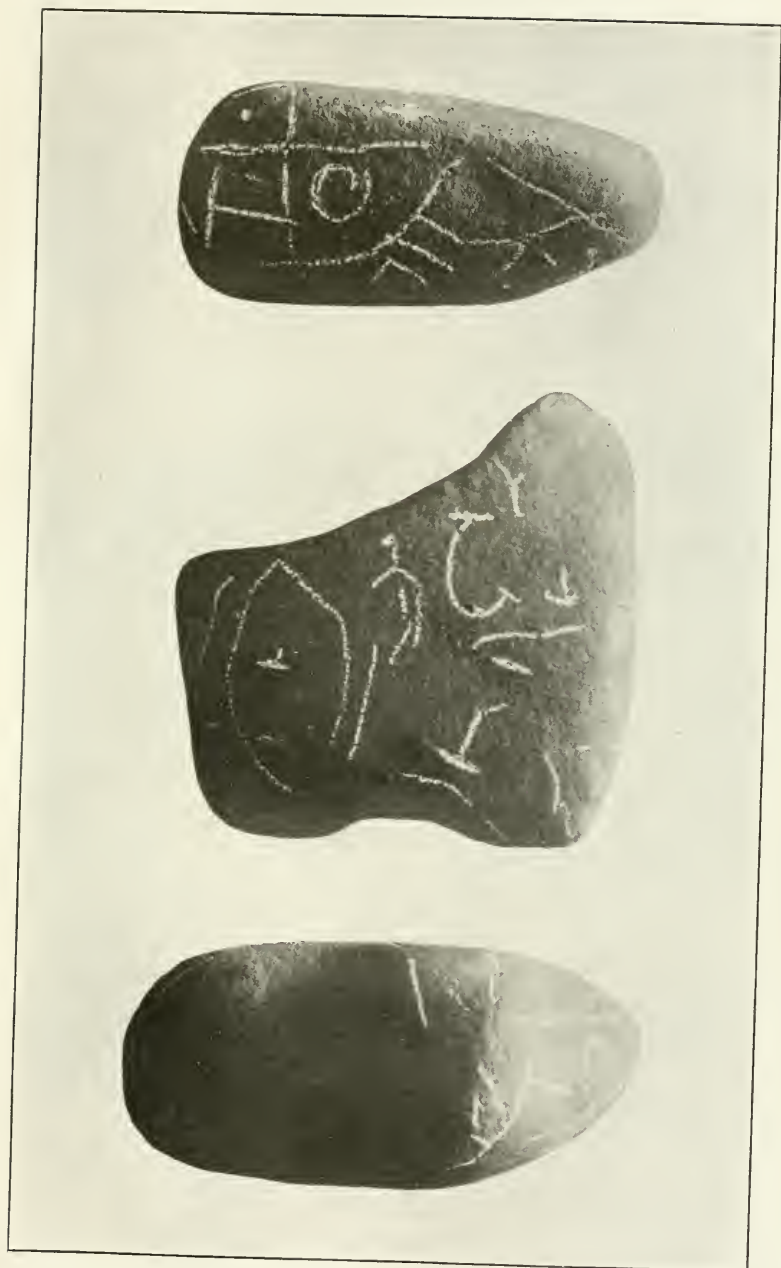
SOLID FIGURE OF BEAVER IN MOOSE HAIR



SLAB A, PLACERES DEL ORO, GUERRERO, MEXICO



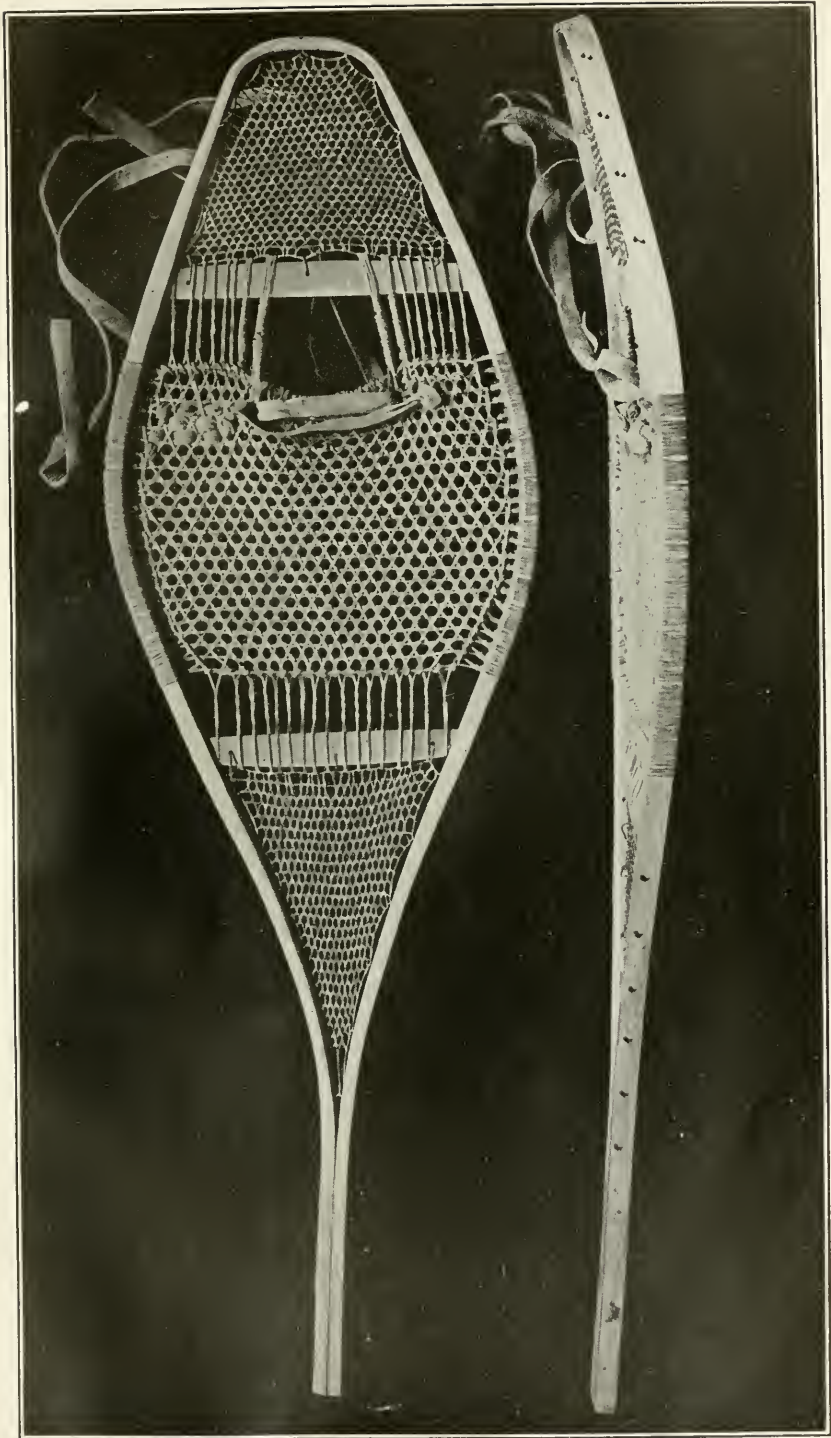
SLAB B, PLACERES DEL ORO, GUERRERO, MEXICO



THREE VIEWS OF AN INSCRIBED BOULDER FROM WEST WRENTHAM,
MASSACHUSETTS



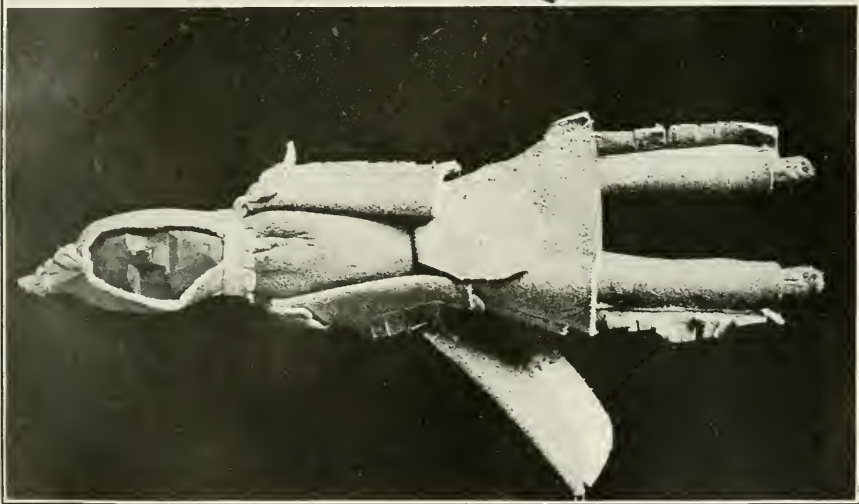
HURON CHIEF (1908) AND HIS GRANDSON



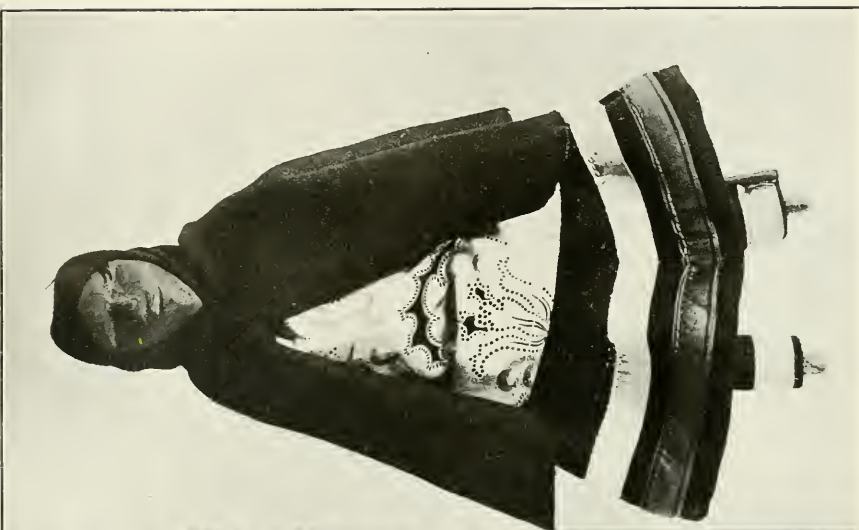
HURON SNOWSHOES



HURON SNOWSHOE MESH-PUNCH, CROOKED KNIFE, MEASURING BLOCK, AND SNOWSHOE NEEDLE



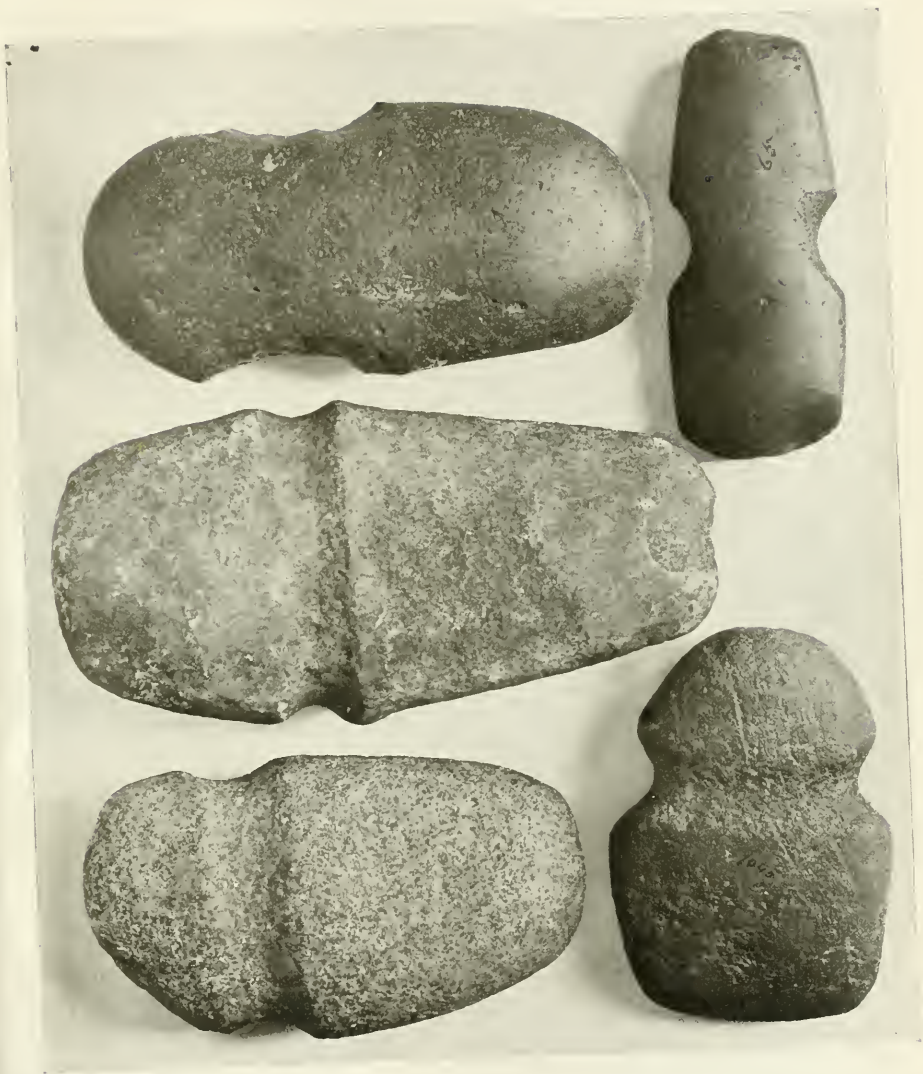
a



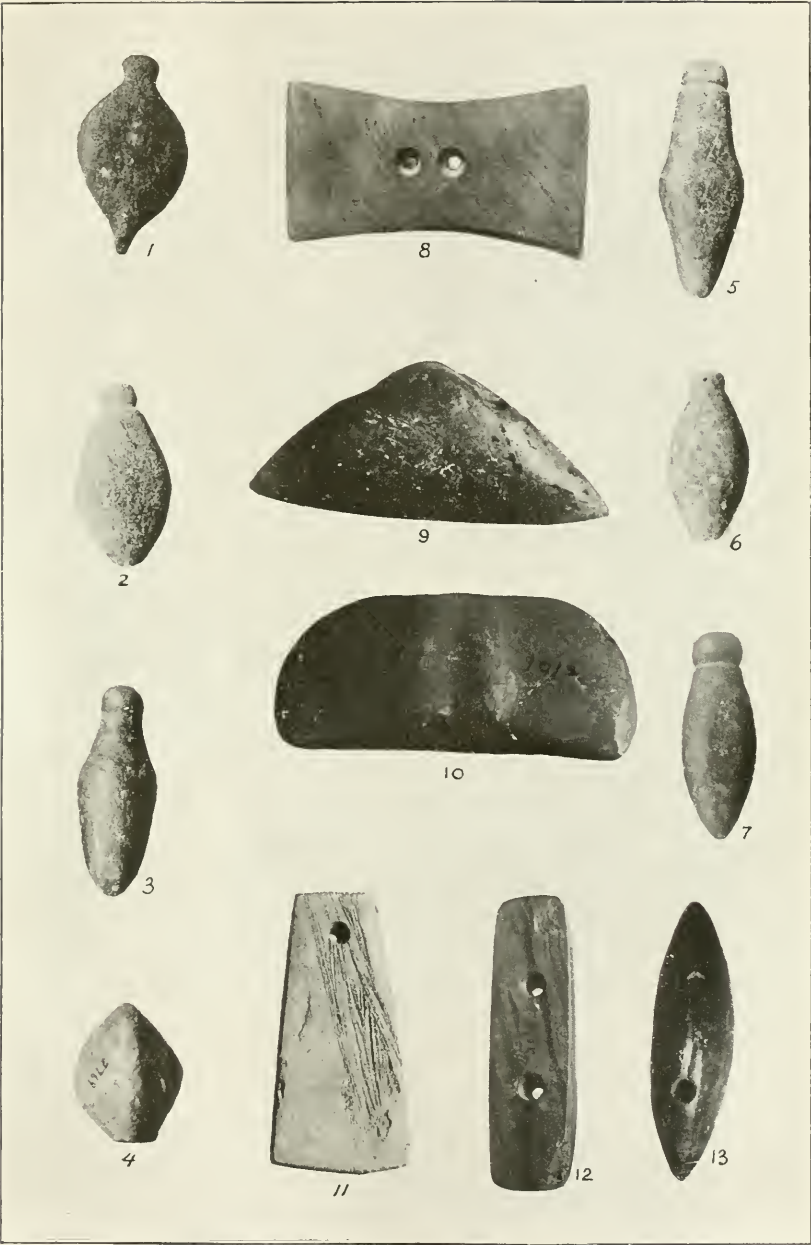
b

HURON DOLLS

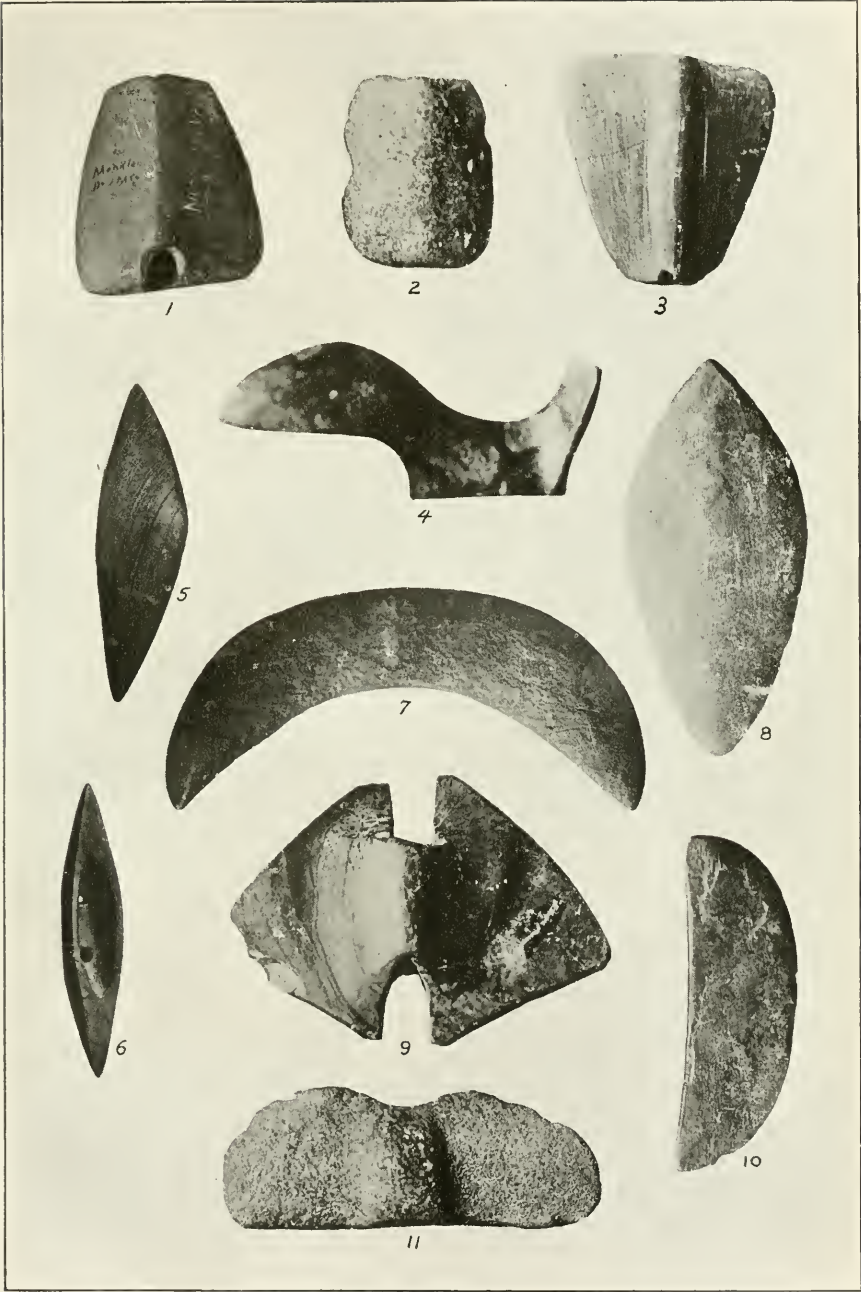
a, male doll; *b*, female doll



GROOVED AXES FROM THE CHAMPLAIN VALLEY (REDUCED ONE-HALF)



PENDANTS AND PROBLEMATICAL STONES FROM THE CHAMPLAIN VALLEY (REDUCED)



PROBLEMATICAL STONES FROM THE CHAMPLAIN VALLEY (REDUCED)



STONE PIPES FROM THE CHAMPLAIN VALLEY (REDUCED ONE-HALF)

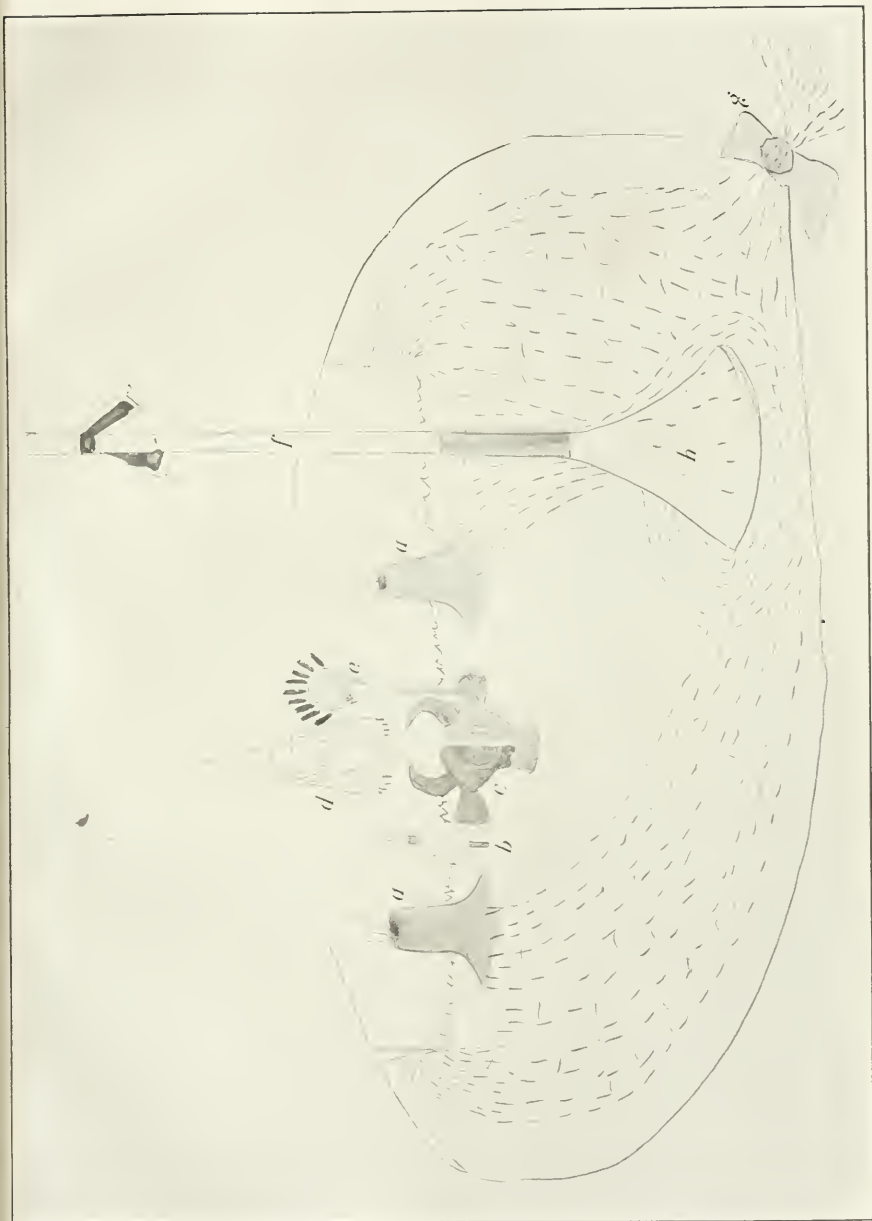


STONE PIPES FROM THE CHAMPLAIN VALLEY (3 FULL SIZE, OTHERS REDUCED)



TAIMAY KEEPER'S ASSISTANT DANCING BEFORE THE TAIMAY

a. One of the four Taimay keeper's assistants dancing. *b.* Taimay image. *c.* Offerings of cloth to the Taimay, cloth unrolled, with upper ends tied, as offerings to the Sun-dance pole.



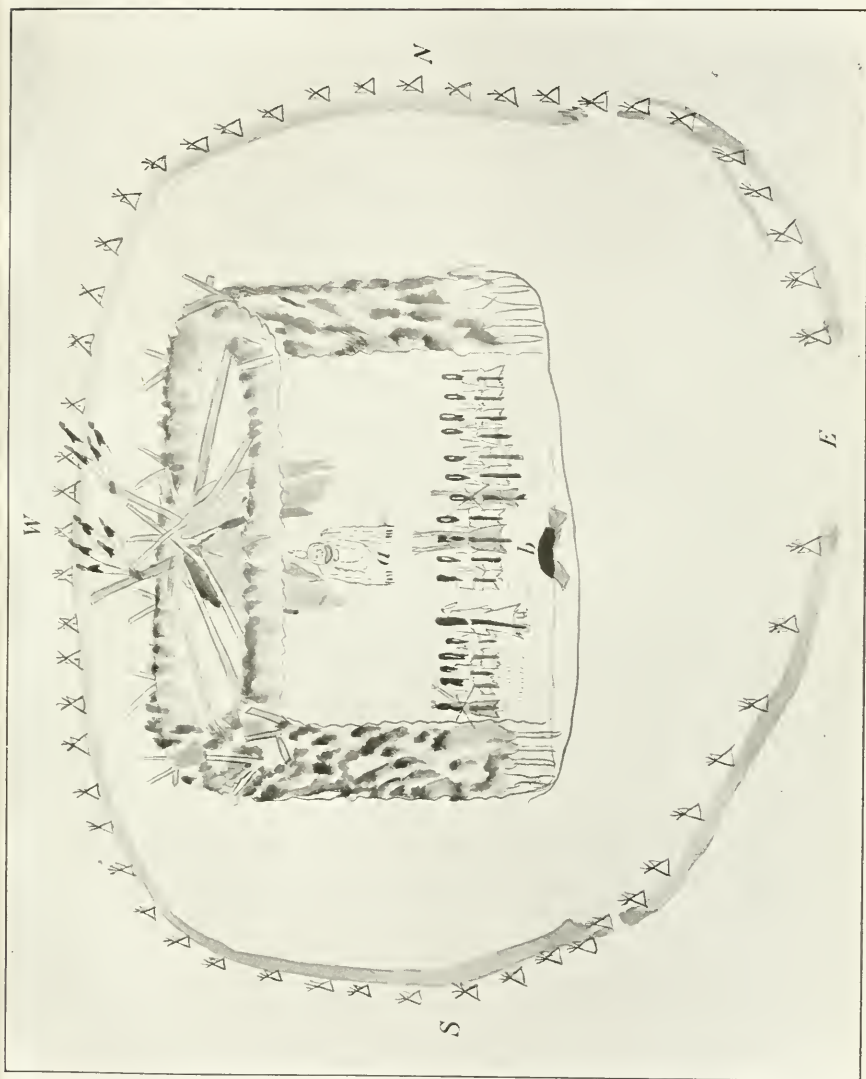
SUN-DANCE PROPERTIES ARRANGED IN THE MEDICINE LODGE

a. Earthen censer containing coals for burning cedar. *b.* Komand's innovation: a woman's root-digger. *c.* Buffalo skull. *d.* Taimay. *e.* Ceremonial fan. *f.* Sun-dance pole. *g.* Stone in the doorway. *h.* Sand mound around foot of Sun-dance pole. ---- Tracks of dancers running in the door at *g*, around the center pole, and behind the left of the cedar screen (represented by the space back of *a*) and emerging at the right.



SUN-DANCE PRIEST (TAIMAY KEEPER) OFFICIATING BEFORE THE TAIMAY WITHIN THE LODGE

a. Assistant of the Taimay keeper. *b.* Komaudy's innovation. *c.* Ceremonial rattles. *d.* Earthen censers. *e.* Buffalo skull. *f.* Earthen censer. *g.* Ceremonial fan. *h.* Taimay image tied to its staff. *i.* Taimay keeper.



THE DANCERS WITHIN THE MEDICINE LODGE PRAYING TO THE TAIMAY

a. The Taimay. *b.* The flat stone in the doorway of the lodge. The outer circle represents the ceremonial circle of lodges.



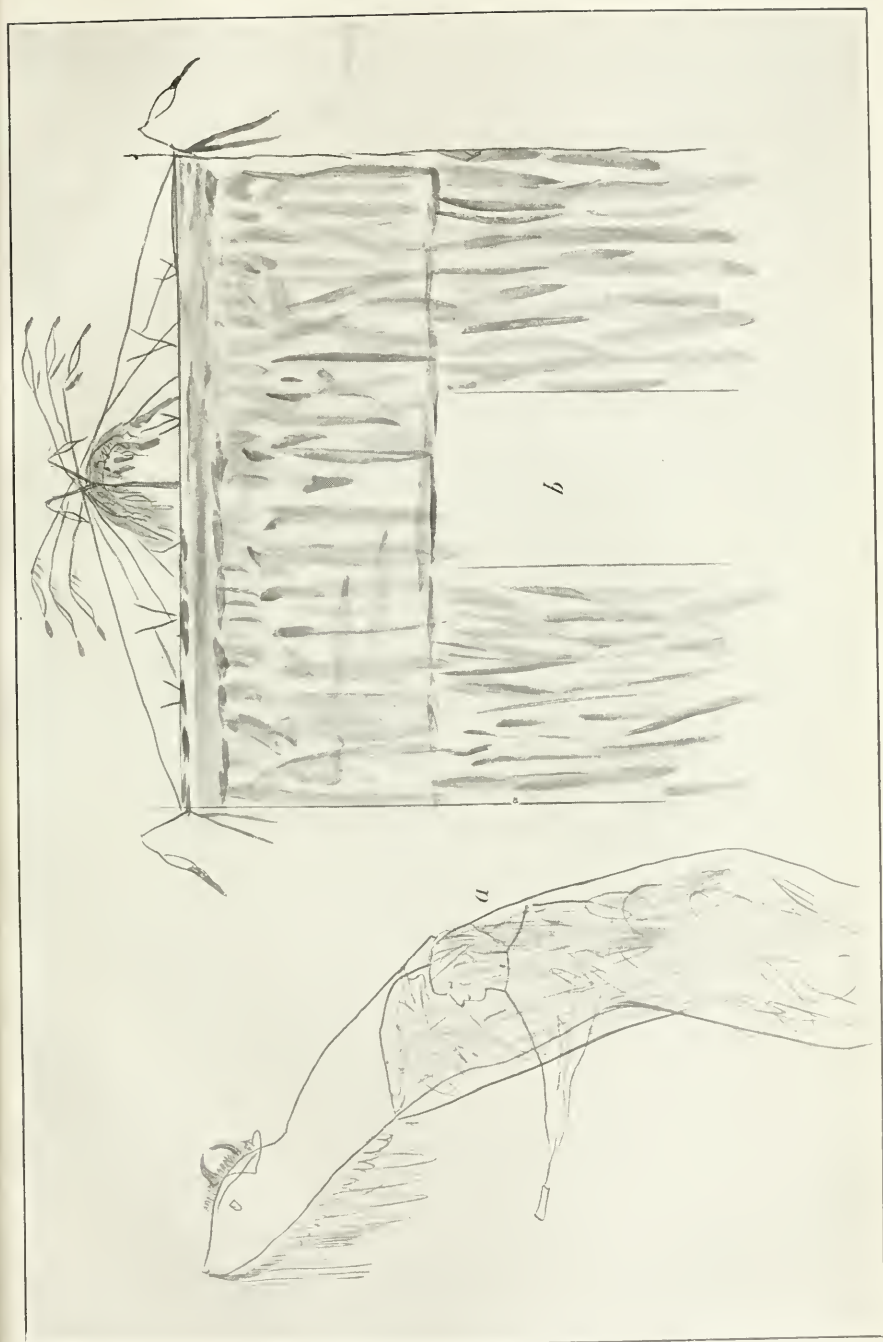
THE TAIMAY KEEPER AND ASSISTANT PRAYING TO THE TAIMAY

a. Offerings to the Taimay. *b.* The staff to which the Taimay is attached. *c.* The earthen censers containing coals on which incense is burned. *d.* Sun-dance center pole. *e.* Medicine buffalo-bull hide on center pole. *f.* Taimay keeper's assistant. *g.* Taimay keeper. *h.* Sun-dance center pole.

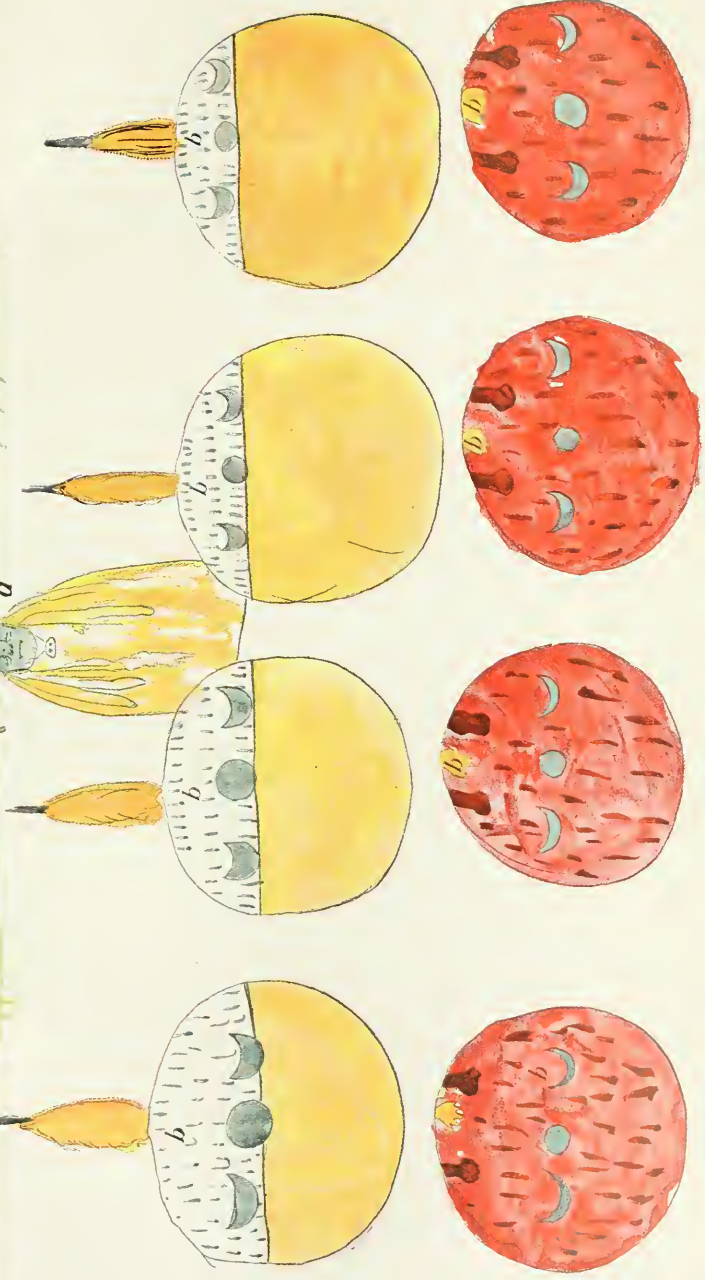


HERDING THE BUFFALO

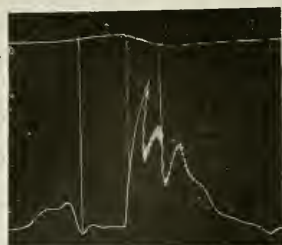
a. The man who drives the buffalo, *b.* The man who brings the buffalo, *c.* The fairway keeper.



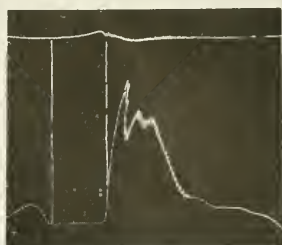
(a) MAN COVERED WITH BUFFALO-ROBE, REPRESENTING A BUFFALO. (b) MEDICINE LODGE



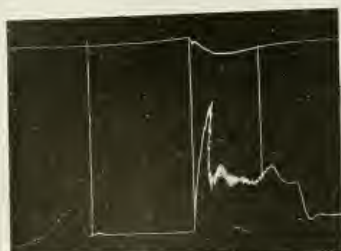
(a) TAIMAY IMAGE. (b) TAIMAY SHIELDS HANGING ON CEDAR SCREEN WITHIN THE MEDICINE LODGE.
 (THE TOP OF THE SCREEN APPEARS AT THE UPPER PART OF THE PICTURE)



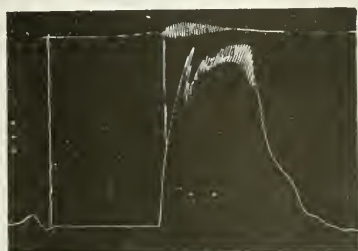
1. d i l



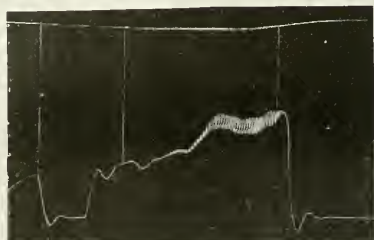
2. d o l



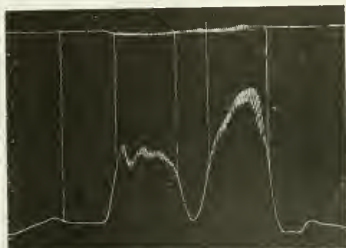
3. t ô



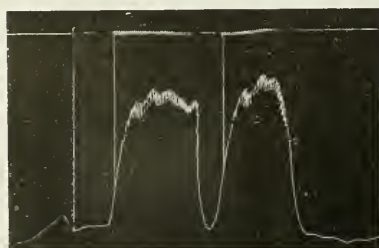
4. t ô



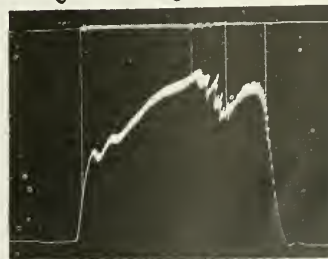
5. r e b



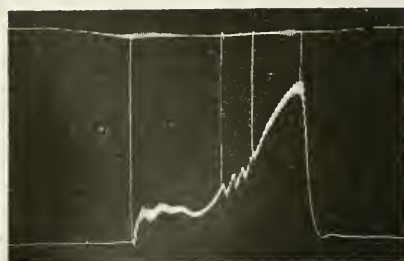
6. g ô g ô



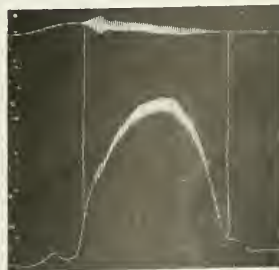
7. g i l g i l



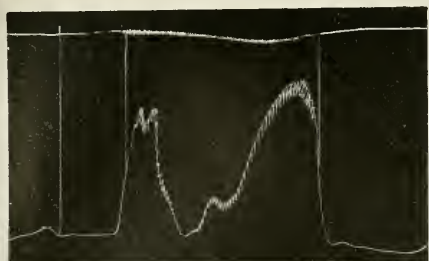
8. k ô r ä



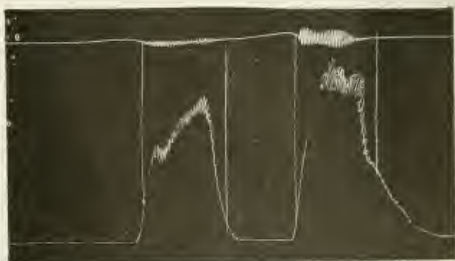
9. m a r o k



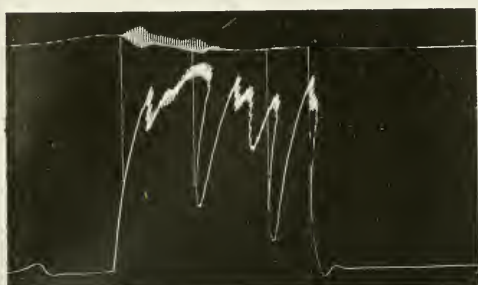
10. r u o



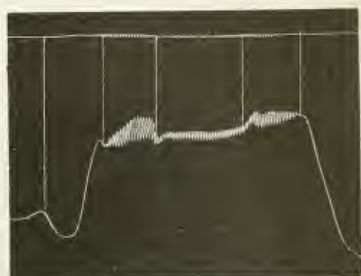
11. k e n u a m



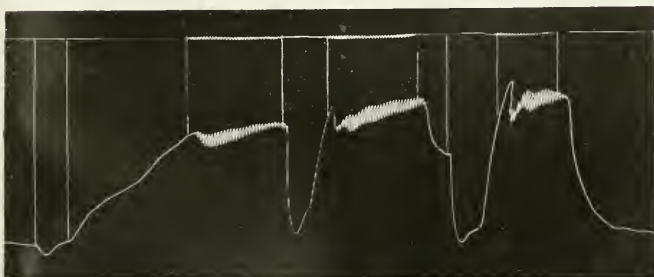
12. g a ñ g ü ñ



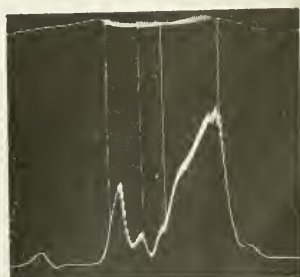
13 b ö d ö k d ö k



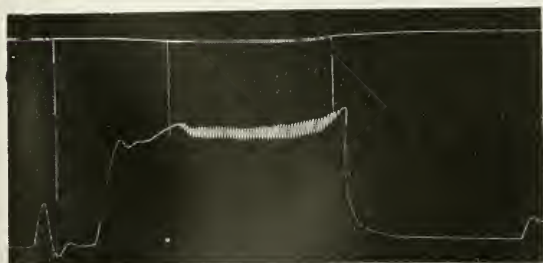
15. j i l u



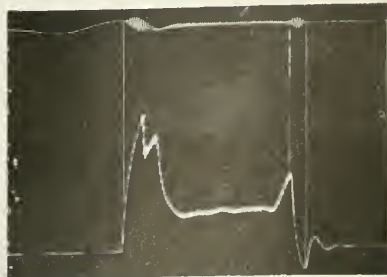
14. b ö d ö k d ö k



16. j i l u



17. b ā d



18. b ā d



19. b ä



20. r l



21. ô ô r



22. l ô j i ö m



23. l ö l



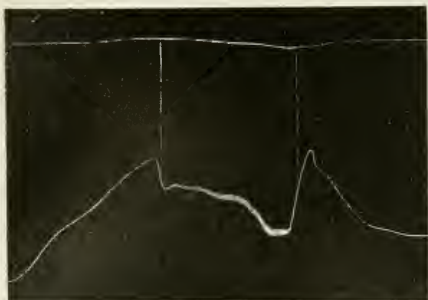
24. r a j



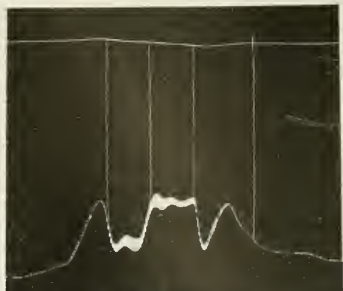
25. r ä g ä



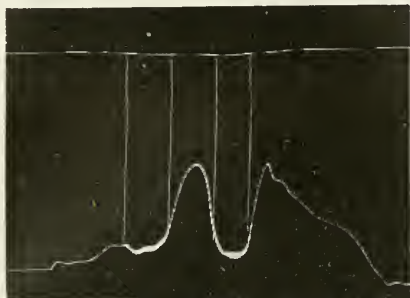
26. dol, dil, tô, to



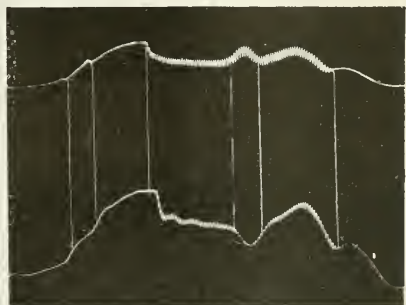
27. j u o n



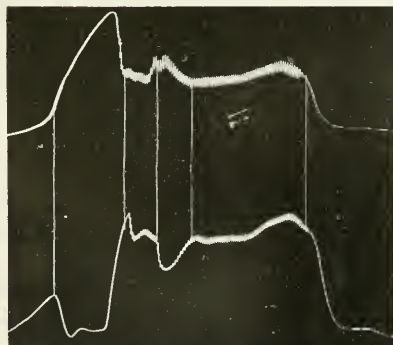
28. j i l u



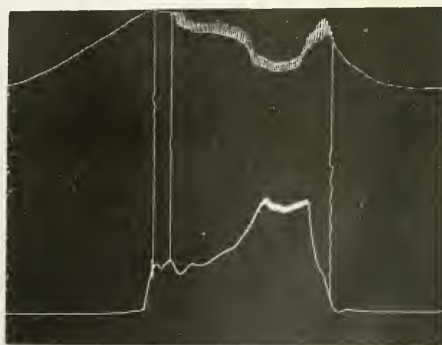
29. e m e n



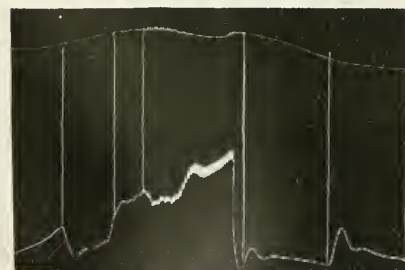
30. l ä ñ ü



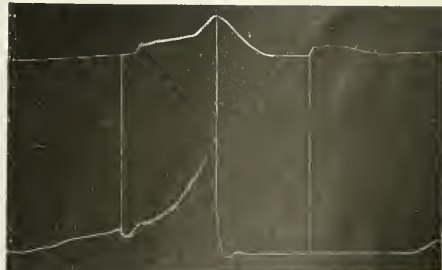
31. k e n u a m



32. r e n



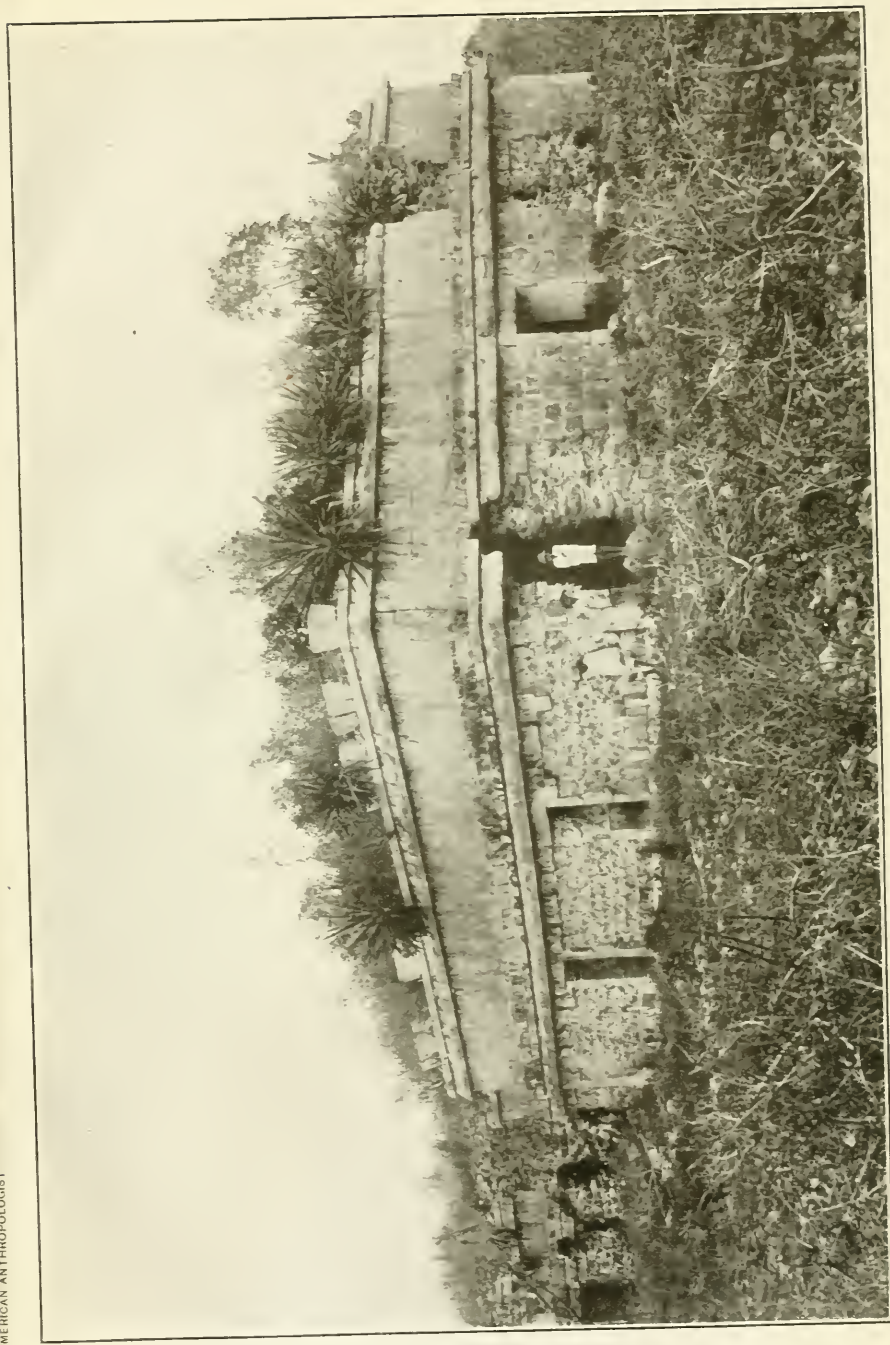
33. r e t



34. ā t



LATERAL AND TOP VIEWS OF A WEST INDIAN THREE-POINTED STONE $5\frac{1}{8} \times 2\frac{3}{4}$ INCHES. (After Fewkes.)



AH-KAT-TZIB, THE HOUSE OF THE DARK WRITINGS

The chamber where the natives are standing is the one mentioned in the accompanying paper



GN

American anthropologist

1

A5

n.s.

v.13

cop.2

1911

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY
